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Art. I.—HISTOIRE DE LA LOUISIANE.*

IN order to understand the nature of things we must ascend to their origin. The old philosophers in forming their theories of the universe always went back to a history of creation; and Moses opens his theology with the account of order evolved from chaos. So the modern physiologist has found out that the best way of studying life and its developements, is to observe the germ and its motions. To understand the character, condition and laws of a people, we must examine minutely the facts connected with their origin; for those facts contain the principle of national growth and increase, and, it may be, of national decay and death. The inquirer into causes is always attempting to reach the beginning of things; for as the effect necessarily follows the cause, he is ever searching for the antecedent of a consequent. And although it is much less difficult to trace the necessary sequence of events in the physical than in the moral world, little knowledge is required to perceive that there exist in the latter as well as in the former, general and fixed laws which govern nations and individuals.

The history of this country affords excellent materials for inquiries into the origin and progress not only of our special society, but of society in general. The facts of American colonization throw light on the remote past as well as on the present and the future. No colonial settlements have been so accurately observed and described as those of

* Histoire de la Louisiane, par Chas. Gayarré, vol. II.—See Commercial Review, vol. I., No. V.

North America; and of course we thereby understand better the general history of all colonies, ancient and modern. The early history of most nations is covered with the clouds of superstition, or the mists of poetry; but ours has been written for us by men skilled in observation, and been transmitted to us with all the exactness and fullness which printing bestows.

Spain, England and France were the principal founders of colonies in the New World; and we find that each of these powers has kept its colonies a length of time proportionate to the popular spirit infused into its institutions. Thus, France has long since lost hers, while Great Britain still retains a considerable portion of her settlements. Hence we may conclude that colonization is more dependant for its success on the people than on the government. The history of Louisiana illustrates the different tenacity with which the three European powers have held their possessions. Discovered and settled by the French, Louisiana passed first into the hands of the Spaniards, and then, after a short interval of French re-possession, into the hands of the representatives of England on this continent. As the second volume of Mr. Gayarré's history is mostly taken up with the cession of the territory to Spain, we propose to examine the circumstances which led to and immediately attended this important event in the annals of Louisiana.

Soon after the treaty of Aix-la-Chapelle, the French government appeared to conceive vast ideas of colonial conquest and aggrandizement. Many ships were added to the navy, and active preparations for some important project were made in the ports of Brest and Toulon. The views of France seemed to be directed more especially towards North America and India. An attempt was made to form an alliance with Spain, and the Spanish ministry was favorable to the plan. But these intrigues were defeated by the British agent, Keene; Ensenada was disgraced by Ferdinand, and an Irishman, Mr. Wall, was elevated to the place of Prime Minister. About the time these overtures were made to Spain, changes were effected in the administration of the French North American colonies. M. de Vaudreuil, who had been for some years governor of Louisiana, was sent to Canada. Mr. de Kerlerec supplied his place in the southern colony. For several reasons it is probable that the object of these changes was not mere ministerial caprice, but that they were parts of a general plan for uniting Canada with Louisiana, and for the consolidation of the French continental possessions. M. de Vaudreuil, by his long residence in America, was supposed to be well acquainted with the resources of the

country, and with the dispositions of the Indian tribes; and as the anticipated operation against the English were to be carried on chiefly in the North, it was better to have such an agent in Canada than in Louisiana. Whereas in case of a naval attack on New Orleans, a probable occurrence from the character of their future foe, a naval captain such as M. de Kerlerec, would be more qualified than an army officer, to repulse the enemy.

At last, in 1755, the rupture between France and Great Britain became inevitable; and the first blow of the war was struck by a young Major, WASHINGTON, destined to be the chief actor in a struggle even more important than that about then to occur between the two most powerful nations of Europe. The contest for colonies, as it may be called, was carried on in almost every quarter of the globe; and the immense naval resources of England, directed as they were, by the skill and energy of Pitt, necessarily gave that country the advantage over her adversary. After nearly six years of war, the Duke de Choiseul proposed to open negotiations with Pitt, and offered terms such as any other person but the English minister would have willingly accepted. Pitt, in turn, made his demands, and haughtily said that no fewer sacrifices would be received from the French government. Negotiations were consequently broken off, and were not resumed until after the Belleisle expedition. Then the demands of Pitt were less arrogant, and a treaty might have been made had not events occurred which caused the French monarch to care less for peace.

In 1759 Ferdinand the Sixth, of Spain, died, and was succeeded by his brother, Charles the Third. The new king was more friendly to Louis the Fifteenth, and less peaceable in disposition than his predecessor. Accordingly, an effort to bring France and Spain into the closest alliance was attended with more success than that made before the commencement of the war. On the 15th of August, 1761, while negotiations were still pending between Pitt and de Choiseul, the celebrated "Family Compact" was entered into; and in order to make the Spanish alliance useful to France, it was necessary to keep up the war with England. Hence de Choiseul proposed that in the treaty between the Most Christian King and His Britannic Majesty, the king of Spain might intervene, that restitution of certain Spanish ships should be made, that permission should be given to Spanish subjects to fish on Newfoundland, and that the English wood cutters in Honduras should be withdrawn from the Spanish territory. This was enough to set the British minister on fire. He immediately wrote to the French minister, expressing his astonishment at such an unusual proposition, and

wished to know of Mr. Wall whether the Spanish government had authorized France to offer such terms. Spain acknowledged the French act, and Pitt immediately saw that not only must hostilities with France continue, but that her ally would become a party to the war. Hence he proposed, in council, to seize the plate-fleet of Spain laden with the treasures of the Americas, and thus give the first blow to the new adversaries of England. His colleagues, however, were not prepared for so bold an enterprise;—the king objected, and Pitt resigned. Lord Bute succeeded him, and though the new premier carried on the war vigorously enough, he soon found that in order to maintain his place it was necessary to make a peace. Accordingly, early in 1763 the treaty of Paris was signed.

During the course of the war, M. de Kerlerec was continually praying for supplies from France. The Indians complained that they received no presents from the governor, and threatened, in case such a state of things continued, to pass over to the enemy. But the French government, pressed as it was on all sides, could find little time to think on the condition of Louisiana, or for means of furnishing its languishing colony. On the 31st October, 1761, two months and a half after the family compact was signed, the French ambassador at Madrid, presented to the court of Spain a memoir in which, to use the language of Mr. Gayarré, he made a humiliating avowal of the weakness of his government, and implored the support and protection of Spain in aiding France to keep Louisiana, by representing to her that this territory would serve as a barrier between the English and Spanish colonies. This reasoning was so much the more forcible as Canada had passed almost entirely into the hands of the English. The French ambassador suggested that Spain might furnish supplies very readily from Havana; but Spain was slow in answering the demands of her ally. M. de Kerlerec continues to ask for aid, and on the 10th February, 1762, he writes to his government thus: "Courier after courier arrives from the Cherokees, demanding that I determine either to abandon them or to furnish the supplies which I have promised, and which are requisite for their defence. I ask them to be patient, but patience is a virtue unknown to them, and they have no resource but to make peace with the English, and turn their arms against us who cannot give them even the powder necessary to defend themselves, for we ourselves will want the means of repelling their incursions. The Choctaws and Alabamas are in the same situation, as well as all the other tribes. This is, in short the position of Louisiana." Although the means of M. de Kerlerec were so scanty, he did signal service for the Spaniards among

the Indians, so as to receive the thanks of the viceroy of Mexico, and of the governor of Pensacola.

In June, 1762, the long expected vessels arrive; but the objects sent were either unsuited to the taste of the Indians or of an inferior quality. The governor complains; and at the same time writes in high praise of M. Foncault, the new commissary-general. De Kerlerec, however, seemed to have been deficient in the talent of administration, and the commissary-general plainly says so to the government. The probability is that even had the supplies been more adapted to their purposes, the governor would have failed in satisfying his Indian allies. Meanwhile, in endeavoring to assist France, Spain herself suffered severely from the English. The Gibraltar of the New World, Havana, was taken by the British, and thus they got the command of all the Spanish commerce in the gulf of Mexico. As some compensation for the losses Spain had suffered during the war, the French court made an offer of Louisiana to His Catholic Majesty, and on the 13th of November, 1762, the gift was accepted. The cession, however, remained secret, France continuing to hold the colony in her name, so that in 1763 we find the French monarch disposing of a part of Louisiana, and assisting to make out its new boundaries. We give from Mr. Gayarré's volume a translation of the seventh article of the treaty: "In order to establish peace upon solid and durable foundation, and to remove forever all matter of dispute in relation to the limits of the French and British territories on the American continent, it is agreed that hereafter the boundaries between the States of His Most Christian Majesty and those of His Britannic Majesty, in this part of the world, shall be unalterably fixed by a line drawn in the middle of the Mississippi river, from its source to the Iberville river, and thence by a line drawn in the middle of this river, and of Lakes Mauripas and Pontchartrain to the sea; and to this end the Most Christian King gives up altogether, and guarantees to His Britannic Majesty the river and port of Mobile, and all his rights and possession on the left side of the Mississippi river, excepting the town of New Orleans and the island on which it is situated, which shall continue to belong to France; it being well understood that the navigation of the Mississippi river shall be equally open to the subjects of Great Britain and those of France throughout its whole length, from its source to the sea, and particularly that part which is between the said island of New Orleans and the right bank of the river, as well as the entrance and departure by its mouth. It is, moreover, stipulated that the vessels belonging to the subjects of both nations shall not be stopped, visited, or subjected to the payment of any

duty whatever, etc., etc." By the same treaty, eighteen months were granted to the inhabitants of that part of America ceded to Great Britain who did not wish to live under the new government, for selling their property to British subjects and removing from the territory. At the same time Spain yielded up to Great Britain all her continental possessions in North America west of the Mississippi.

But although the several European nations, parties to this treaty of Paris, were satisfied with the terms of it, the Indians had no idea of being thus summarily transferred from one sovereign to another. The Cherokees, Choctaws and Alabamas were especially irritated against the French; not only because their lands had been given up to the English, but also because certain presents which had been promised by the Governor of Louisiana had not been sent to them. M. de Kerlerec in writing to his government an account of the dispositions of the Indians, and of their demands, says: "I think it will be better to give the savages the presents for which we are in arrears, notwithstanding the state that the treasury must be in after a long and disastrous war: 1st. because these presents have been legally promised and we have received an equivalent for them in real services; 2nd. because we shall thus secure the affection of the Indians, and their attachment preserved by tradition from generation to generation, will be useful to us in case France should wish to enter forcibly into the possessions from which she has been forcibly expelled."

Soon after sending the despatch, a part of which we have just translated, M. de Kerlerec was recalled to France, and confined in the bastile for certain charges made against him by M. d'Rochemore. A new Governor, d'Abadie, was sent out by the French Government; and from these two facts we see that France, although she had ceded Louisiana to Spain, not only furnished officers for the colony, but also took some interest in the administration of its affairs. Some weeks after M. d'Abadie's arrival at New Orleans we find in a memoir sent to France by Redon de Rassac, who, as Mr. Gayarré suggests, probably occupied an official position in Louisiana, certain reasons why the colony had never flourished. The memorialist sums them up as follows: "1st. Under M. de Vaudreuil, half the married women sent to Louisiana were fifty or sixty years old and had no children; 2nd. Their families, or the greatest part of them, have been put below the English Turn, in a marshy and unhealthy country requiring constant labor to keep up the levees; add to this, the poverty, misery and debasement of the men and the prostitution of the women; 3rd. The officers carry on commerce and make slaves of the soldiers; add thereto the unworthy pil-

lage practised by them and tolerated by the Governors, and the dissipation of the soldiery; besides drunkenness, quarrels and duels, have destroyed one half the inhabitants."

Indeed Louisiana was so troublesome and expensive to France, that it was a great object with her to get the colony, as soon as possible, out of her hands. In the year 1764, M. d'Kerlerce, who was still in the Bastille, presented a paper to the minister advising him to make a commercial depot of Louisiana. A ministerial note annexed to this document shows in what light it was regarded by the French Government. "As there are," reads the note, "in this paper some details which would lead the Court of Spain to anticipate a rupture with the English and thus make the cession of Louisiana less agreeable, it will be best to re-model this memoir and render its facts more interesting to the Court of Madrid."

In a despatch dated the 21st of April 1764, M. d'Abadie was notified of the cession to Spain in the following words: "Monsieur d'Abadie: Having by a private act passed at Fontainebleau the 3rd November 1762, ceded fully and wholly and without any reserve to my very dear and well-beloved cousin, the king of Spain, and to his successors and heirs, all the country known under the name of Louisiana, as well as New Orleans and the island on which it is situated, and his Catholic majesty having by another act passed at the Escurial and signed by the king of Spain the 13th of November of the same year accepted the cession of the country of Louisiana and of the town of New Orleans, conformably to the copy of the said acts which you will find subjoined, I write this letter to tell you that my intention is that on the reception of this present and the annexed copies, whether they come to you through the officers of his Catholic majesty or directly by the vessels taking charge of them, you deliver into the hands of the Governor or officer especially appointed by the king of Spain, the said country and colony of Louisiana and the posts belonging to it, together with the town and island of New Orleans, as they may be on the day of said delivery, desiring that in future they should belong to his Catholic majesty, to be governed and administered by his Governors and officers, as belonging to him wholly and without reserve.

"I order you, consequently, as soon as the Governor and troops of this monarch arrive in the said country and colony, to put them in possession, and to withdraw all the officers, soldiers and employees in my service who may be there in garrison, and send into France or into my other American colonies, those who do not wish to remain under Spanish authority.

"I desire, moreover, that after the entire evacuation of the said port and town of New Orleans, you collect all the papers relative to the finances and administration of the colony of Louisiana, and come to France in order to give an account of them.

"My intention is, nevertheless, that you remit to the said Governor or other officer appointed, all the papers and documents which specially concern the government of this colony, either relative to the boundaries of the territory or relative to the Indians and the different posts, after having withdrawn all the receipts necessary for your discharge, and that you give to the said Governor all the information you can to enable him to govern said colony to the reciprocal satisfaction of the two nations.

"My wish is that there should be a double inventory singned by you and the commissary of his Catholic majesty, of all the artillery and all the stores, warehouses, hospitals, vessels, &c., which belong to me in the said colony, so that after having put the commissary in possession of the vessels and public buildings, an appraisement may be made of all said effects remaining on the ground, of which the price will be reimbursed by his Catholic majesty on the foundation of said appraisement.

"I hope, in the meantime, for the advantage and tranquility of the inhabitants of the colony of Louisiana, and I promise myself in consequence of the friendship and affection of his Catholic majesty that he will give orders to his Governor and every officer in his service in the said colony and town of New Orleans that the ecclesiastic and religious houses which fill the curacies and missions continue their functions and enjoy the rights, privileges and immunities granted them by the titles of their establishment; that the ordinary judges, as well as the superior council, continue to render justice according to the laws, forms and usages of the colony; that the inhabitants be secured in their property and goods, according to the grants made by the Governors and administrators of said colony; and that said grants be held and reported as confirmed by his Catholic majesty, although they may not have been so by me; hoping, moreover, that his Catholic majesty will give to his subjects in Louisiana the same marks of protection and benevolence which they have experienced under my rule, and of which the horrors of war have alone prevented them from feeling the greatest effects.

"I order you to register my present letter in the superior council of New Orleans, in order that the different states of the colony may be advised of its contents, and that they may, on occasion, recur to it, the present being for no other end.

"I pray God, Monsieur d'Abadie, to have you in His holy keeping. *Signed* Louis, and *below*, Duke of Choiseul."

M. d'Abadie, however, was not destined to transfer Louisiana from France to Spain. On the 4th of February 1765, he died, leaving M. Aubry in command of the colony; and it was only after years of trouble and vexation that M. Aubry was able to carry out the plans of his royal master.

Of course when the colonists heard that a new king and a different people were to be put over them, they were much excited and determined to make such representations to the French government as might induce it to change its intentions. Accordingly a meeting of the citizens was called and the parishes were invited to send delegates to New Orleans. The principal persons of the province met, Lafréniére, the Attorney-General, being the leading member of the assembly. It was resolved to send a petition to the king of France praying him not to cut them off from the mother country; and M. Jean Milhet, a merchant of New Orleans, was chosen as the bearer of the petition.

On arriving in Paris, the first step of M. Milhet was to see M. de Bienville and obtain his aid in the performance of his mission. The old man readily gave it; for nothing could be more repugnant to his feelings than the cession of a colony which he had been chiefly instrumental in building up. M. de Bienville accompanied the merchant in his visit to the minister; but how could it be expected that a colonial *bourgeois* and a decrepid old soldier would be able to engage the duke de Choiseul in any measure requiring an increased economy in the court, and a consequent diminution in the pleasures of the courtiers?

In the meantime, the Spanish government was slow in taking possession of its acquired territory. It was not until the year 1765 that a Spanish officer was appointed to receive the colony. On the 10th of July of that year, M. de Ulloa wrote from Havana, informing the superior council of New Orleans that he had been ordered to perform this office, and that he would in a short time proceed to execute his commission. But Ulloa did not arrive at New Orleans until the 5th of March 1766. His reception by the citizens was such as might have been anticipated; they appeared gloomy and dissatisfied. The council asked him to exhibit his powers; he refused on the pretence that he did not yet intend to take possession, saying at the same time that he had nothing to do with the council and would treat with M. Aubry only.

Besides the natural difficulties of transferring a people's allegiance from one monarch to another, there were financial difficulties in the way of a quiet transfer of Louisiana from France to Spain. The French government had issued bonds for the payment of the soldiers in its service, and these bonds were still unredeemed. They were scattered through-

out the colony, and, of course, the people wished to know what was to be done with them in case of a change in the government. A long time had intervened since these bills were put out, and they were then circulating in the country at a discount of 75 per cent. M. Foucault stated these circumstances to Ulloa; and although the latter had received no instructions on the subject, he promised that on his receiving the government, he would publish an ordinance requiring the Spaniards to take them from the French at their current value. The French were informed of this; but it had little effect on them. Ulloa then sent out agents to buy up the bonds at 75 per cent. discount; few sellers, however, were found, inasmuch as the holders of them hoped the king would redeem them at par.

Another difficulty arose from the refusal of the French soldiers in the colony to enter into the service of Spain until the Spanish troops arrived. Ulloa had brought only ninety men with him, and it was impossible to hold the country with such a handful.

No formal transfer of the colony had yet been made, but Spain was in 1766, to all intents and purposes the owner and ruler of Louisiana. On the 6th of September of that year, M. Aubry published a commercial ordinance in the name of His Catholic Majesty, and at the instance of M. de Ulloa. Besides, the French government had accepted no bills of exchange drawn on it by its officers in Louisiana, since 1763. These circumstances ought to have opened the eyes of the colonists, and shown them that they were really the subjects of Charles the Third. But no; the merchants presented a remonstrance against the ordinance of the 6th September to the Superior Council, which Ulloa had pronounced to be without any political power whatever. It might be said that the king of France by his letter to d'Abbadie, had given an implied guaranty that the old forms and laws should continue in force, and consequently that the Superior Council still retained its political power. Really, however, Louis the Fifteenth had only expressed a wish that his cousin, the king of Spain, would keep up these forms and laws. Also, in the beginning of 1767, Ulloa offers to lend Foucault the money necessary for redeeming the disowned bills of exchange drawn on France, and promises to pay all the expenses of the colony since his arrival there. The offer was a proof of Ulloa's goodwill, and the acceptance of his promise shows that Foucault considered him the real governor of the country.

About this time, some misunderstanding arose between the two governments as to the time when the liabilities of France for the expenses of Louisiana terminated and those of Spain began. Some of the views

of both governments may be seen in the despatch of M. de Grimaldi to M. de Fuentes, the Spanish ambassador at Paris. "Ulloa arrived at New Orleans the 5th of March, 1766. He did not then take possession for motives already explained. M. de Praslin will remember that there were some doubts as to our acceptance. But as the same reasons which made France believe the cession necessary led Spain to accept it, the king received it, although perfectly aware that we did so at an annual expense of from two hundred and fifty to three hundred thousand dollars in consideration of a negative and distant benefit, to wit, that of possessing a country in order to keep another nation out of it.

"Moreover, nothing has been stipulated as to the time when Spain should take possession, and it ought not to be matter of astonishment that we have not been in haste; for if the colony is useful we have lost our profit; if it is not, why hurry ourselves to run after a burdensome weight? This is the reason, Sir, why we are surprised that the Duke de Praslin expects us to pay the expenses incurred since 1763. There is no more reason for it than for demanding of us all the expenses incurred by France since the settlement of the colony. This claim is more singular, inasmuch as, from the time of the cession to the arrival of Ulloa, France has enjoyed all the advantages of the commerce of the colony, and even now continues to enjoy them while we are defraying all the expenses. Not a single Spanish vessel with merchandize has yet been in Louisiana. All that have been there were French. Would it be just for France, having retained the use of the country, to demand of Spain the expenses of the colony before the latter had put her foot in it?

"The king, always unwilling to predjudice in the least the interests of the most Christian king, his cousin, although he has known from the beginning that the colony would be unprofitable, although M. de Ulloa has not taken possession of it because he has not the support of the French troops on which he thought he might rely, and although the commerce has been for the benefit of the French, the king, I say, has declared that he will defray all the expenses since Ulloa's arrival.

While the two governments were thus discussing the matter of expenditure, M. Milhet returned to Louisiana, and thus ought to have convinced the inhabitants that all hopes of a continued connection with France were lost. Meetings were held in different parts of the country, and at length a second convention was held in New Orleans to take into consideration the affairs of the colony. Lafreniere took the lead; and, at his suggestion, an address to the council was voted, praying

the expulsion of Ulloa from the province. On the 29th October, 1768, the council decreed the expulsion of Ulloa, Aubry protesting against it; and on the 31st the Spanish governor sailed for Havana.

The planters and merchants of Louisiana published a memoir justifying the course they had taken; and in order to give an idea of the commerce and commercial notions of that period, we make some extracts from it. "* * * * To make our first cause of complaint more evident, we must observe that the trade with the Indian nations is one of the principal branches of commerce. The interest of the trader is so united to that of the agriculturalist, that one cannot exist without the other. This trade furnishes an outlet for the products of several manufactures, and may, by encouragement, be extended. It is an abundant mine of wealth, and promises treasures worth more than the metallic veins of Potosi, and the more considerable the deeper the trader digs. From this source flow public and private benefits. The merchant finds a lucrative market for his commodities; the laborer, employed in these expeditions and this trade, finds means of subsisting and of amassing a little capital. The affection of the natives is kept up by intercourse with the French ready to procure them the articles now become necessary to them. In fine, the public safety, which has been brought about by this trade with the barbarous tribes, is by it preserved. But this is not the only benefit which arises from it to the colony in general. The ships from Europe and the islands, drawn hither by the hope of an advantageous return, bring in provisions of which we are in need, and finding in our warehouses peltries on which they expect to make a profit, these provisions are distributed to us at a moderate price; otherwise, if the ships were obliged to return in ballast, the price would be excessive. These facts, these real advantages have been considered by our ministers when they have by their order encouraged the traders and recommended freedom in this branch of commerce. The truth of them has been recognised and expressly declared by the Duke de Choiseul in his letter to M. d'Abbadie, dated 9th February, 1765. The whole northern part of the Mississippi and the north-west of the Missouri, were then opened to our enterprise. Numerous tribes, rich in rare peltries and inhabiting these unknown regions, would, in a short time, be conquered by our manufactures alone. The discoveries to be made in these fine countries would be reserved for our efforts, and our eyes would first pierce, for the good of the world, this part of the world yet to be explored. How encouraging to us were the intentions of this wise minister! We beheld him, with transports of gratitude, not only lend his aid to the re-establishment of our for-

tunes shattered by the misfortunes of war, and to the increase of our resources almost destroyed by the conditions of the peace, but also extend his views to geographical discoveries, and trace for us on the same plan the road to fortune and to glory. A brilliant project which M. de Ulloa has deranged, and would doubtless have overturned! Let us not seek to penetrate his motives, but confine ourselves to an examination of his obstinacy and of his efforts against the freedom of trade. They were first manifested by a general prohibition. The inhabitants and merchants in the Illinois country first cried out against it. They represented through M. St. Ange, the French commander at that post, that their ruin was certain, and the danger inevitable of being pillaged and perhaps massacred by the savages, who, not entering into political considerations, wished to be furnished with our goods and to trade constantly with their peltries. Notwithstanding the opposition of M. Rici, the Spanish captain sent by M. de Ulloa into the Illinois country as commander, the traders have this year gone into the villages, with the difference only that they have been reduced to a certain number; but this was the last effort of their expiring privileges, and M. Ulloa, about the same time, granted to five or six individuals the exclusive trade in these regions, which our ministers would have kept open to all.

"The timber trade is another object which engages the merchant here, whose interests are, as we have said, so closely bound to those of the agriculturalist. In the representations made to the Superior Council of the province, it has been stated that the trade in timber amounted to five hundred thousand livres every year, and this has not been contradicted. This trade, which is open to every one in proportion to the force under his command, and is always certain to yield a profit in this proportion, is the first object to which the husbandman directs his attention on commencing, and continues to receive his attention after he is settled. Take away the freedom of trade in Louisiana, shut up the market for the sale of timber, and you immediately reduce the merchant and colonist to idleness and famine. The ordinance published the 6th of September, 1766, only threatened this misfortune. His Catholic Majesty, we were told, informed by M. Ulloa of everything touching the furnishing and developing of the country, wished to favor the inhabitants so far as to permit the trade in timber with vessels coming from St. Domingo and Martinique, until Spain might have the means of carrying on the trade. But what probability was there that this time would ever arrive! It was plunging in the dagger gradually, and the final stroke was the decree. In the first ar-

ticle it is said, that the cargoes shall be made up only in the ports of Seville, Alicante, Carthagena, Malaga, Barcelona, Corunna, &c.: in the eighth, that the return cargoes shall be for the same ports. In the third article, the vessels clearing for Louisiana shall be Spanish built, and the captains and crews Spanish or naturalized. Finally, in the fourth and ninth article, voluntary stoppages in any American port even under the Spanish rule, are prohibited, and forced stoppages are subjected to proof and other onerous duties. Did there then remain to us any hope for our trade in timber with the French colonies of St. Domingo and Martinique, the only places where the commodity was valuable? Imprudent and unthinking critics on our conduct in the present revolution, may, by problematical combinations, attempt to restore the interrupted harmony and reconcile us with the decree; but they must first point out to us the means of subsistence.

"Besides, what appearance of resources can remove our just apprehensions? The produce of our land and our commerce consist of timber, indigo, furs, tobacco, cotton, sugar, pitch, and tar. Furs have very little value in Spain, as they are not much used there, and even those used are done up in foreign countries. Havana and Peru furnish her with sugar and timber much preferable to ours; Guatimala, a superior indigo, and more than their workmen consume: Peru, Havana, and Campeachy, cotton; the Isle of Pines, pitch and tar; Havana, and the Spanish portion of St. Domingo, tobacco. Our raw productions, inferior to those of its vast possessions, useless and superabundant in its ports, are rejected and reduced in value. What a feeble return must we then expect from the exportation made to the ports to which the decree sends us! On the other hand, the few manufactures established in Spain, joined to the small aid which the maritime towns receive from internal agricultnre, force the subjects of his Catholic Majesty who live in these towns, to draw their provisions of every sort from foreign countries. Marseilles supplies corn to these ports, which cannot get their provisions from their own country without paying enormously for a difficult transportation over a mountainous country. The whole nation is the tributary of the manufacturing countries of Europe, and Providence has remarkably favored it by making it mistress of Peru and Mexico, and thus furnished it with the means of buying its necessaries. Rich by our industry only, can we hope that Spain will foster it and give us a good price for it, when she is obliged to buy her own at great expense? Nothwithstanding the momentary exemption, promised by the decree from, from all duties on goods sent to Louisiana, these facts known to the whole world, together with the

certain fall in value of our productions in the ports of Spain, make us fear that our crops, although abundant, far from recompensing us as formerly for our application and industry by giving us superfluities, may cease to supply us with the pure and simple necessaries of life."

From these extracts we not only learn some of the grievances complained of by the colonists, but we perceive something of their habits of thought and the boldness with which they advocated certain principles of trade and commerce. But their remonstrances addressed to the French king were of no avail. The minister looked coldly on the deputies sent by the colonists to deliver their address, and told them that they had nothing to expect of him. The king of France could not take back his gift, and the Court of Spain, after having formally decided on keeping Louisiana, entered upon measures necessary for maintaining its authority there. Lafreniere and some of his friends thought of forming the colony into a republic, and of placing it under the protection of England; but while the project was under consideration, General O'Reilly, the new governor arrived. On the 24th of July, 1769, he was at the Balize with a force large enough to overcome all opposition. The leading rebels against the Spanish government were the first to offer submission to the new governor; and they soon found that they had to do with a man of firm and energetic character. One of his first acts was the condemnation to death of several of the ringleaders in the late rebellious movement; and although this might appear cruel to the French of that time, we can hardly censure O'Rielly gravely for it, particularly if we consider how loose must have been the ideas of a Spanish soldier of that time on the subject of treason. It is well known what an important revolution O'Reilly effected in the laws of Louisiana, but an account of these changes belongs more properly to a history of our jurisprudence than to a general history of our State.

With the departure of General O'Reilly from the colony, and the arrival of Don Luis Unzaza as his successor, Mr. Gayarré closes the second volume of his history. We thank him for the pleasure he has afforded us in the perusal of so many of the documents connected with the annals of the State; and, as our readers may perceive, we have given several long translations from the work. We hope that he will soon let us have the continuation giving an account of the Spanish dominion in Louisiana; and we have a guaranty that this part of the work will be with him a labor of love, inasmuch as from certain indications in the present volume he seems to regard the Spanish cause in the most favorable light.

Art. II.—A FEW NOTES FOR SUGAR PLANTERS.

The greatest sum of knowledge acquired with the least trouble, is, perhaps, that which comes with the study of the few simple truths, the basis of the laws of Nature, and which the observing mind finds beautifully written out in natural language, speaking volumes of wisdom to him who moving through the world trains his eye to observation, and his mind to reflection. Very many of the phenomena of nature, which to the uninformed appear prodigies, are only beautiful illustrations of fundamental knowledge, which is not an oppressive weight, but a charm that sustains the student in his labors, and enables him to add to his store every new and important fact, giving it place and relation until each acquisition successively elevates a structure of correct proportions and increasing strength, which at last becomes a fortress of enduring knowledge. It is a common prejudice that persons possessing instruction in general laws extending over the wide field of what is termed education, have had their attention too much divided, and can know nothing perfectly, but the very reverse is true; for general knowledge renders all particular knowledge more clear and precise, and is a foundation already laid, to be built upon at any angle. The ignorant man may be said to have charged his hundred books of knowledge with single objects, while the informed man makes each support a long chain to which thousands of useful things are attached. The laws which govern nature in all her works are to us keys, which, properly applied, give free admission to the mysteries of her palaces and gardens; are the wards of her magic power which unveil the face of the universe, and disclose endless charms of which ignorance never dreams. A man reading a thousand volumes of ordinary books, as agreeable pastime, will receive only vague impressions, but he who studies the methodized book of nature, converts the great universe into a simple and sublime history, which tells of a Creator, and may worthily occupy his attention to the end of his days. In seeking an enlarged view of things, we are too apt to overlook the very objects of our search, and too late in life discover that our habits of observation are entirely general and superficial, instead of being close and particular.

Things that are seen, felt, and heard, that is, which operate on the external senses, leave on the memory much stronger and more correct impressions than where the conceptions are produced merely by verbal description, however vivid; and an author of an essay or a volume

may often hear his readers and critics say "he has written well, but told us nothing new;" thus, unwilling to confess ignorance of what their pride whispers they ought equally to have been possessed,—or as if novelty and originality should be the inducements to a writer. But in the rudiments of knowledge only, very few of us are sufficiently familiar, and with reference to this familiarity persons who take a philanthropic view of the world, will observe with pleasure that those of their fellow travellers in life who are most generally informed and familiar with the laws which govern matters, are men most fertile in resources, more independent of others, and therefore more reliable upon themselves, and the contributions which the world at large receives from such hands deserves a greater recompense for their more extended benefit.

The agriculturalist will esteem vegetable physiology as the highest branch of natural science, and will observe that it depends absolutely upon an exact knowledge of parts and constituents, and that any attempt to investigate the important laws of vegetable life must necessarily be abortive without a strict acquaintance with the not less important details of organization. And by this is not meant merely a general idea of external form, or a vague notion of internal anatomy, but the most precise knowledge that the nature of the subject will admit. This, in the sense of perfection in one branch, and exclusive study therein; but how much more is to be acquired for practical utility by more general observation at first, and thus surrounding the subject from the borders, make regular approaches toward the centre. The farmer confines his labors not solely to the production of wheat, nor the planter exclusively to the culture of the cane or the cotton plants, but each must likewise attend to his crops of corn, of hay, vegetables, etc., each governed by its peculiar laws of re-production, which must be conformed to with little deviation. Neither is vegetable life the only branch for their attention, while they have to provide the animal power to perform the labors of cultivation, and it takes not long to discover that the greater part of the phenomena of organic and inorga ic life are merely chemical and physical phenomena modified by an additional principle.

Intuitively, we learn the rotation of the seasons, and the planter adapts his labor thereto, with definitive result. The seed is not placed in the ground in mid-winter, nor a harvest expected in mid-summer. But beyond these things, which are only the routine of common existence, the intelligent mind finds the field of observation opening with

extended view, as it progresses in the ever constant labor of adapting existing means to desired ends.

The cultivation of cane would not be attempted on land where water constantly stands, for it would be vain, while the same locality would produce a crop of rice with little labor. And beyond this, aside from the facility of inundation, we learn that the rice will grow in comparatively dry land, and that "flowing" is not absolutely necessary to its production. The cultivation of the same plant successively for several years, is found to impoverish the soil it is said, if continued on the same field, and while some of our neighbors are warm on the subject of rotation of crops, others have almost equal confidence that the powers of the soil may be sustained by deep ploughing, proper manuring, or returning to it the otherwise useless trash of its production. This necessity of rotation in crops being now proved by the experience of the planter, he is led to discover that nature herself, unassisted by art, brings about the same ends. The pine forest, destroyed by fire, is soon replaced by oaks and other trees. The mangrove swamp having existed for a century, even until successive contributions of its leaves falling upon the water, and there detained to decay, by the floating roots of the same plants, at last accumulate material and elevate the soil above the level of the water, when the mangroves die and are succeeded by the cane-brakes. With them come the numerous grasses, the seeds of which planted by the wind, soon take root and thrive until their production, together with that of the cane, again raises the soil to another level, whereon the stronger trees of the forest succeed.

Plants require different organic matter at different times, and are not always prepared for the natural vicissitudes of their existence; wherefore we observe that protracted rains, drought, temperature, all, sources of nutriment as agents of nature to the plant, produce definite result upon its growth, but different one time with another, and it becomes desirable to know how to make best use of such incidents. For this purpose the knowledge of vegetable anatomy and physiology, by which we may in a measure comprehend the structure and causes of increase, will lead to a better understanding of the wants and material necessary to each plant, and how these supplies may be best obtained and administered, to the attainment of more profitable results.

Since the discovery of the microscope the world has learned not only that plants breathe, feed and digest, but how the functions of breathing, feeding and digesting are carried on. It has been ascertained by what means an increase of dimension is brought about; how their want of

locomotive power has been compensated for, and by what precise means their reproduction and multiplication are placed beyond obstruction by any natural impediments. In short, the exact use of every plant for its various parts has been distinctly ascertained, and in the end the vegetable kingdom is rendered subject to the power not only of man's physical energies, but of his mental resources.

The two great sources of food to plants are the soil and the air, and consequently we observe that they take their nutriment only when resolved to liquid and gaseous forms, whatever be the shape in which it is administered. And these elements of their nutrition are the great primitives of creation, carbon, the gases, earths, and metalic bases. But each plant has not the same demand as others for these respective aliments. To the cereals, to which belong the rice, corn and cane plants, nitrogen is essential, and water, the great source of production becomes indispensable to their growth. The glossy coat of the reed tribe and the outside membrane of the cane stalk, etc., are attributable to silex taken up from the soil, and the absence of which in old cane lands is supposed to be the secret of their poverty. To remedy this deficiency, the combustion of the "shuck" is practised, but a second thought will show to an intelligent mind that the silex, liquified by fire, combines with the alkali of the plant-ashes, and becoming vitrified by heat, is restored only in an insoluble state not available to vegetation, and operating beneficially only to heavy or moist soils, by its mechanical distension of their components, facilitating the action of the air more uniformly throughout. For the same reason we mix heavy bog earth or alluvial soil, with loam and sand. In the beautiful camelia japonica, we find a peculiar demand for hydrogen, and therefore supply it with water, the principal source of this gas, protect the plant from the sun to provide against too rapid evaporation from its roots, having placed it in a soil consisting chiefly of vegetable fibre, which thus sheltered has an affinity for moisture, while its decay produces the element chiefly in demand. Nitrogen is a not less important food for cereals, and is chiefly supplied by the decomposition of water. It is the principal ingredient in *gluten*, which by the vital action of the cane becomes transformed to saccharine, and though drainage may be the great labor of this southern country, because of the surplus of water on its soil, yet there are other available methods to compensate for this superabundance of water, and productive of effect in a greater or less degree. An excess of moisture without heat, and combined with air, induces decay in seeds, and is injurious even to growing plants, as it destroys the delicate tissue of their roots. Therefore plants cultivated where they have an abundance

of heat and mo'sture, but where the roots are beyond the reach of air, by reason of their depth in the soil, have a tendency to produce leaves instead of fruit, and all their secretions are weakened. And on the other hand too little moisture prevents the leaves and fruit from maturing. Hence we derive the maxim, "plant deep on dry, and light on moist ground."

We observe that all woods growing in warm, moist climates, are lighter and more porous than those growing in colder and dryer situations. There is also a marked difference in their durability commensurate with their density. They arrive at an earlier maturity, and all vegetation partakes of similar construction, grown on similar soils. The soft and pithy woods, too, yield only weak and watery saps, and it is but in few plants belonging to the same climate, that oils or extracts exist in quantity sufficient to work out. They are not formed, or will not rise without a certain degree of heat, and it is well known that frost arrests all currents of circulation. The secretions all are diminished by reduced temperature. The fruit of the walnut and the beech in the south of Europe produces oil, but will not in this country. The mulberry of this country affords a much less quantity of gum to the silkworm than in France or Italy; and the ground-nut oil, so common in the East Indies, as well as cocoa-nut oil, are not known in the West Indies as articles of commerce.

That all the secretions of a plant have a definitive purpose in the vegetable economy, is beyond a doubt, but that these purposes are not yet definitively known, is equally true. We have no satisfactory explanation of the cause of fragrance in flowers, neither its use to the plant. The saccharine contained in the seed is the primary motive power in its vegetation, and from this source is eliminated the other juices which tend to the future nourishment of the plant. Germination having been effected, the development of the roots under ground, and the stalk and leaves above, is at once produced by the additional moisture attracted by vital action from the air and soil. This moisture is decomposed by the greater attraction of the carbon of the seed for the oxygen, and carbonic acid is set free. The nitrogen contained in the gluten of the seed, by its union with the acid, is converted into diastase, a substance resembling sugar, from which the young plant now takes all its nourishment, until by more sufficient extension, it becomes able to feed itself.

The formation of the vital knot, or "collet,"* which has been com-

* The joint of the cane underground.

pared to the heart in animals, now becomes more and more distinct, and as it approaches perfection is proportionably more essential to the life of the plant. At this stage the wounds received from the implements of cultivation, or the hoof of the animal drawing the plough, are more liable to prove fatal to the shoots of the cane, or the new plants from the cotton seed, than at any other period of their growth, and the prudent planter will watch with some care that the mule or horse does not travel on the "ridge row."

The cane plant increases from its centre, but has no sensible pith or medullary canal. Its tissue is but a bundle of woody fibres, interposed by an infinity of little cells. The long succession of these fibres is interrupted at regular distances by joints, sometimes distinguished as nodes, which perform an important part in the econamy of the plant. Sap, as it rises through the collet, is little less than water, with some mucilage, in the young shoot, but as soon as these nodes are formed, they become receptacles of little particles of gluten, starch, and sugar immediately formed, and these are thence taken up by the sap, dissolved, and pass into the general circulation of the stalk and leaves. The sap of the sugar maple and the cane is not sweet in their roots, but in beets, as though the operations of nature could be reversed and produce the same results, we find, comparatively, no saccharine in the tops.

The cortical integument of the cane plant is only a rind and not a bark, as it has no distinct separation from the wood. It is possessed also of properties of secretion, contains a coloring property and oleaginous substance, which the body of the cane does not, and which are both extracted in the common operation of rolling by powerful mills. This coloring matter is strictly tannin, and the oleaginous is readily separated from the froth of the mill-strainer, and converted into wax. In the circulation of the juice both of the maple and the cane, as well as in all plants, we observe changing qualities in the various parts and times of its circulation. The nearer approach to maturity in the tree, enriches its juice, and the little of returning sap found in trees felled during winter and exuding from their cut ends, is almost concentrated by a short exposure to natural evaporation. We observe, then, that during the annual existence of a plant, while the vital current is in motion, a regular and constant change in the juice at every stage of maturity, and the different properties it posseses during this progression, deserve constant attention. It is the vital action which converts the sap to sugar, and when the motion that belongs to vitality is arrested by frost, the conversion to sugar also ceases. Cane juice once

frozen has but an uncrystalizable sugar, and yet the canes being only "frosted," are taken to the mill and still yield sugar, because congealization having taken place only on the ends and surfaces, protects the center from the same change, as the covering of snow protects the earth in winter from the deep frosts, which would entirely destroy the roots it contains. But so soon as these frozen portions of cane juice are free to move, chemical power alone is left to them, and with extraordinary rapidity they then circulate in the sap as the active principle of fermentation, which in a very short time extinguishes all traces of sugar to the great loss of the planter. This stagnation of the juice in the cane, by which its vitality is affected and its properties changed on the re-application of heat, is a phenomenon parallell to the fermentation of juice exposed at a moderate temperature to the free circulation of the air, which all planters know to be injurious in proportion to the length of time and degree of temperature, and therefore expedite the process of sugar making as much as possible.

The nodes of the cane, incorrectly called joints, by microscopic examination are found to be the ovaries of the plant, and from which start one, and in some varieties of the East India cane two buds. By a peculiar arrangement of the fibres of the center, a little cell is formed, in which, as in seeds, a concentrated portion of sugar exists to afford nourishment to the germ until of such age as to obtain its own. And in this protection of the vital spark by portions of the mother plant, stronger and more indurated than all the rest, we observe the beautiful work of design. In stubble or ratoon land, where the stems have been cut from the plant, we observe that the collet, or lowest joint, becomes the seat of life and the source from which in succeeding seasons reproduction takes place. Injury to this, therefore, is fatal to the plant. As spring advances, the soil becoming warmer, the circulation under the collet commences, and the old stem sealed against the exit of the sap by the dead-wood above ground, prevents its escape and forces it to find new outlets. Here again the microscope developes to the eye numerous little bright spots upon the collet, which soon increasing become at first buds and afterwards shoots. This process of reproduction we can at once see by analogy with all other vegetation, cannot last many seasons in canes, were we not convinced by the result of experience, that canes not only run out in a few crops, but also degenerate and become weakly and small. The shoots starting from a short distance beneath the surface, are sufficiently near to the air to receive warmth and moisture, from which they then derive their chief nourishment, and at a later day should be covered lightly with earth,

when it becomes more essential to protect them from the sun. At this age of the plant, (not more than at others, however,) it is plain that all its nourishment must be taken up from a liquid or gaseous state, and we can scarcely conceive that such inorganic matter as silicon or flint, should be conveyed mechanically to its every part, but must be organized from its secretions. Everything that can act as manure, would apparently be only soluble substances, and we see minerals, earths, metals, and vegetable fibre, undergoing decomposition and assuming new combinations of their elements, to aid in the new developement of vegetable life.

As is the lime to the animal kingdom the base and principal material in the construction of its frames, so is silex in the vegetable world. It is what hardens the rind, the bark, the stem, and the limb, and, aside from the fluid contained in cellular substance, is the chief cause of gravity. All parts of the animal are nutriment to the vegetable kingdom, and no constituents of the former have been discovered to be noxious to the latter. Yet vegetables and plants are susceptible to poisons in a common way, by means of their circulation. Innoculation with arsenic will kill the lilac, and a solution of nux vomica, introduced by the veins to the hop-vine, is fatal in a few hours. Prusic acid in minute doses, changes the bright green of the ash-leaves to the dismal yellow of autumn. The roots, too, of plants take up solutions which, though not fatal to themselves, may be of deleterious influence to animals feeding upon them, and form distinctly an observable influence upon their own secretions, proved by tests applied to the extracts made from their barks. It is observable, therefore, that the amount of their acid secretions may be influenced by the application of alkalies, lime, amonia, &c., to the roots, as is known to be the case on the sorrels, and may be inferred to be upon canes, which fact every planter should prove for himself. In some districts of Louisiana where shell is abundant, this could be well determined, and for how many seasons its beneficial effect should last, as well as the detail of the application of lime as manure to sugar cane, might be proved and given to the public.

It is not to be forgotten that sugar is a solvent of lime, and if any method can be discovered by which its use can be dispensed with in the process of clarification of cane-juice, a decided advantage to the operation of sugar-making will at once appear. Besides that the alkalies neutralize the acid, they lessen the quantities of sugar in the result, and incline that result to a redish color. However, the *use* of lime in sugar-making is not fully understood, and many planters now make their crops without it. To the soil, it is the great solvent of all

vegetable fibre, and in like manner is potash; but when their caustic properties are lost or consumed, they are no better than limestone or coal ashes, both of which mixing with the more tenacious clay, make it friable and porous, more pervious to water and less retentive of moisture; therefore not all cane lands can be equally benefited by these applications. Our own, and the practice of our neighbors, must be the guides to all useful results in the application of manures, mode of tillage of canes, process of sugar making; to simplify and perfect all of which, should be the object of constant study, experiment, and observation of every planter. We are all in want of some practical information on these subjects as well as many others connected with the interests of the planter. In the rotation of crops a question lays, is it better to turn cane land to grass, to peas, or corn first, and by what succession is the first object best accomplished? And again, with which crop to apply manure, if with any and not to all.

It is not for us now to go farther into the practice of planting, but from this brief view of a few of the points of common interest, enough of the field has been laid open to show the extent of the land, to what degree the planter becomes his own chemist, and how, dependant upon himself and his own resources, it is plainly necessary that *he* should consumate his own advancement. To effect this, he cannot stagger blindly forward, hoping by various chance experiments to stumble upon some great improvement, but must, if for no other than the sake of economy, study first the probability of success. He must know enough of the laws of nature and the rudiments of science, not to attempt impossibilities. To employ his agents successfully, he must surely understand their nature, and the mutual influence which they exert on each other, he must understand more fully the structure and functions of plants—the office performed by each of their members, &c. Many of the errors which are committed in agriculture, would be avoided if the planter would consent to unite a larger portion of scientific information with his practical skill. In such case, he would not apply the same manures indiscriminately to all soils; he would not suffer land to lie waste which might easily be rendered productive; nor would he be content with a meager crop from soils which, with moderate outlay, might be increased in their fertility fourfold.

We are far from supposing that any scientific knowledge can supersede a practical acquaintance with cultivation, but it is the help-meet to the husbandmen, and the knowledge which he gathers from personal experience, will teach him not to disregard the light which may be afforded by the experience of others, and by the researches of science. The

crucible, the retort, and the lamp of the alchymist, though they have not yet revealed the philosopher's stone or the elixir of life, wisdom and wealth have been acquired to the world, and the whole human family benefitted by the developements which these vain researches have given. One man attempts what the laws of nature have forbidden, and by his example benefits his fellows. Another attempts an object practicable in itself, but by means totally inadequate and innappropriate, opens a mine, and expends a fortune for machinery and labor, where the geologist could have foretold a failure. Another proposes to increase the heat of his furnace by forcing in steam instead of air, and discovers that the fire instead of being increased is extinguished; a result which a slight knowledge of chemistry would have prepared him to expect. A third projector prepares a vessel for submarine navigation, but not estimating properly the pressure of water at different depths, is crushed to death during his first experiment. It is plainly important, then, to gather from science the light necessary to protect us from the delusions of an excited imagination, and to guide us in the way of safe and profitable enterprise.

An instructed laborer is enabled to become an improver of the art in which he works, and even a discoverer in the sciences connected with it. He is daily handling the tools and materials with which new experiments are to be made, and daily witnessing the connected operations of nature, whether in the changes by motion or the chemical relation of bodies, and the opportunities which he eminently possesses, must pass unimproved if the artist have no knowledge of principles. But with this knowledge, he of all men, is most likely to fall upon something new, which may be useful in art, or curious and interesting to science. His practised eye in the field, and dexterous hand in the manufactory, may enable him to embrace many opportunities afforded, which he would otherwise pass unheeded by. The processes, too, being often on a large scale, and consequently very expensive in many cases, it becomes the more important to devise means of saving labor and material, while the very magnitude of these operations often brings out facts and principles which would otherwise have remained imperceptible. But the importance of scientific attainments is most apparent when we consider, that in any department of arts, every enterprising operator ought to be informed of the improvements which have preceded his labors in that department, otherwise he may consume time, labor, and money, in merely reproducing what has long existed, and perhaps in a shape preferable to that of his invention. It is obvious that after the first and most important principles have been acquired, and there seems

to be a light over the whole subject of search; there will be still many difficulties to be met, many obstacles to overcome, and toilsome days and nights consumed, in the nice adjustment in our mind of what we acquire, to render it applicable to practicable purposes. Half the labors of great mechanics, such as Whittemore, the inventor of the card machine; Perkins, of the nail machine; Jaquard, of the carpet-loom; who were originally men of small acquirements in early education, might have been saved if at first they had been instructed in the principles of mechanical science. Accident sometimes casts up important improvements in such a way that the artist can hardly fail to seize upon them, but in these cases even, it will be generally found that only the man of science can perfect these improvements.

Watt confessed that the knowledge he acquired from the lectures of Dr. Black, on chemistry, though but hints, to his studies and the mathematical and mechanical attainments he derived from study with such a man, alone enabled him to perfect those great improvements, the beam and the condenser, to his steam engine, which were the patents of his noble fame. Arkwright is quoted as an uninstructed mechanic, and he devoted *five* years to the perfection of his spinning-jenny, now considered a very simple machine. Sir Humphrey Davy discovered the peculiarity belonging to mephitic gas, after a long series of labors, and but then applied it to practical utility in his safety lamp for miners, and it is stated by Lord Brougham that the new process of sugar refining, through the aid of animal carbon, by which more money has been made in a shorter time and with less risk and trouble than was ever, perhaps, gained by an invention, was discovered by a most accomplished chemist, and was the fruit of a long course of experiments, in the progress of which known philosophical principles were applied, and new principles ascertained. The great chemist, whose improvements in the manufactures of iron were the foundations of a princely fortune, owed it entirely to the result of deep research and long continued study of coal, by which he was at last enabled to substitute the mineral for the vegetable in the smelting of iron.

We are to infer from these illustrations and examples, that no eminence can be attained in any profession, nor particular success in any calling, without study and labor, and that to secure the result for which we strive, we cannot plod on in the dull routine of life, half blind to what is doing in the world around us, allowing ourselves to be surpassed by other laborers, possessed of inferior opportunities, but a perseverance and observation which secures to them the benefit of all they see, and a comprehension of all they observe. The seeing eye and the working

hand, and the mind which conceives all things, are the only guarantees to ultimate success to the planter, the manufacturer, and the merchant. Our independence is hereby secured, that unaided by others, we can produce the cane, make the crop, and sell it at the best time, and highest price, then turn to our plants and rattoons of the succeeding season with a consciousness of capacity for our labors which shall be the sweetest and most constant reward of our toil, and surety for our success.

L. B. S.

Art. III.—THE PLAQUEMINES REGION OF LOUISIANA.

No. II.

The whole of the parish of Plaquemines, as is well known, is alluvial, formed by the deposits of the Mississippi, and is perhaps the last formation of land upon the earth. This is true of the whole lower valley of the river, and it is supposed to be the work of many centuries, but of the lower part of the parishes it may be said to be the work of comparatively a very short time. Within the memory of persons now alive the tillable land in some places was but a short distance from the front, and lands now in cultivation were subject to the tides. Lands surveyed since the year 1800, and declared by the surveyors to be free from the overflow of tide-water only three acres, are now in cultivation nine acres back from the river. The distance of the river from the gulf in some places, has increased from one and a half to three miles. So long as the river above had freedom to overflow its banks, and a thousand outlets for its waters, the rise, overflow, and consequent deposit below must have been comparatively trifling. When in course of time the lands above, and on the river were settled, and levees made confining the river to its channel, the deposit in this lowest part of its course must have been large and rapidly made. We find that plantations leveed even twenty years ago have in some places a bank on the outside of the levee a foot higher than the land inside. These deposits form the richest imaginable kind of soil, intermixed with more or less sand, as they have been made, rapidly or slowly. The heaviest portions only of the matter held suspended by the water being deposited when in rapid motion. Hence we usually find the points upon the river containing more of sand in their soil than the bends. From Point à la Hache, which is fifty miles below the city, and having a depth of nearly a mile of tillable land, to below the Fort St. Philip, on the same side, the strip of land not subject to be covered

by the ordinary tides, becomes more and more narrow until the tides and the river occasionally intermingle their waters. This strip is of variable depth, say from three to ten arpents, and one or two points even exceed ten arpents. The timbered belt varies in width from one mile to nothing; and a very short distance below, the fort entirely disappears on either side. The growth consists of cotton wood, sycamore, swamp dogwood, willow, myrtle, wild pecan, hackberry, elm, ash, bay, live oak, water oak, cypress, and persimmon, from which last the parish takes its name.

The rise of the river at Point à la Hache, or the difference between the highest and lowest stage of water, is six feet. At New Orleans it is said to be twelve feet; at Fort Jackson, below, only four feet.* What then becomes of that vast body of water which raises the river twelve feet at New Orleans, and only four at the forts, which are but seventy miles below! Can it be the increased rapidity and volume of the current? Is evaporation an item of sufficient importance to be taken into account? There is no outlet for the water from the city to the forts, and the diminished amount must be accounted for on some such principle as the above. On the east bank the land falls towards the sea very rapidly, being three feet for the first three or four arpents, and a gradual declination afterward of about three feet more to one mile, when the land runs off into wet sea marsh, covered by the daily tides. When the banks are less than six feet, of course the fall becomes less as the level of the sea is supposed to be at low water mark of the river, or very nearly. On the west bank the land falls more slowly from the river, and is all the way more deeply wooded. The chenieres beginning where this inclination stops, there is formed a larger reservoir of water, which planters on the front find it difficult to drain; their canal and bayous, even when circumstances are favorable, being barely sufficient to carry off so large a quantity of water. But when adverse tides and heavy rains happen together for any length of time, they are often productive of much damage. It is the opinion of many, that the east bank, below the cypress swamp, possesses in this particular an advantage over the west bank, though probably more subject to encroachments from the sea. Yet the rapidly receding tides leave the land in the same state as at first, the water remaining so short a time as to have but little more effect than a heavy rain. Even this could be prevented, by having a levee around the field of from two to four feet in height, with gates to drain the rain water when the tides were out.

* At Baton Rouge the rise is sometimes as great as thirty feet.—Editor.

Deep and frequent ditches, with good levees and gates are all that are requisite to make the lower coast, from Point à la Hache to the forts, that "*terra incognita*," the most beautiful and productive planting and farming countries in the world. The country below is, in particular; because that above is well known, and it is believed that the lower port of the parish possesses advantages in health, temperature, climate and variety of productions, that are not shared by that above. As a rice growing country its superiority is not denied by any one who is informed upon the subject. Under the rudest system of agriculture, and the most inferior implements and machinery, thirty bushels of cleaned rice is now obtained from fields sown broadcast. Under a better system, and with the certainty of being able to drain from the river, when the wants of the crops require, heavier returns can be expected.

The experiments made in the culture of tobacco have resulted in the production of a fine article, and what perfection could be obtained when knowledge and experience are brought to bear upon it, remains to be seen. Ginger grows well in the gardens, and is thought would make a profitable crop for market; mention has been made of its superior adaptability to the growth of sugar cane, and also to the orange, lemon, citron, fig, banana, plantain, pine-apple, olive, and most of the palm tribe, all of which the writer has seen in luxuriant growth, with the exception of the palms and pine-apple. A banana was seen by him, which bore the last year a head or spike of eighty bananas; an old orange tree, from which were sold the last season, twenty-two hundred oranges, besides a great number which were eaten,—the price here varying from one dollar to a dollar and a half per hundred. Many persons lead an easy and lazy life, under the shade of their orange and lemon trees, and upon the sale of their fruit; some orchards being the sole property of the owner, producing fifteen hundred to two thousand dollars, supporting him without labor of any kind, even the trifling exertion of gathering their fruit.

All these beauties and advantages of Plaquemines might exist to but little purpose if nature had withheld that first of blessings, without which there can be no enjoyment. But to her other gifts it may safely be said she has added that of high health to its inhabitants, and no where are people so free from disease and so likely to live a long life of uninterrupted health as in the parish of Plaquemines. The first circumstance to be noticed in proof, is, that there are not six planters in the parish who do not reside upon their plantations, and with their families. There is no place where the young are more healthy, the men stouter, and the aged of both sexes more hale and vigorous. Taking the past

year as a test, there has been but two deaths of white adults among the residents, both during acclimation and from exposure. Of six hundred men within the parish engaged in the oyster trade, leading exposed and irregular lives, not one death has been known. But should a change of air or place be desirable, within a half day's journey by land and water of every plantation, lie numerous islands of shells and sand from fifteen miles to one hundred yards in length, the waters about which abound in oysters, turtle, crabs, and fish of every description known to southern seas. Delightful fishing excursions are often made to these islands at leisure times of the residents and others, and one of them, Breton island, fifteen miles in length, is inhabited by a family. One or two more will have summer-houses upon them in the course of another season. The Island of Grande Terre, though not in the parish, is still convenient by means of the bayous, through the sea marsh to the west and is a delightful resort, superior in every respect to the Mississippi gulf shore, which has of late years attracted so many people in search of health and pleasure. It is the opinion of persons who know both places well, that the bathing, fishing, and sailing advantages of the bay of Barataria, with its romantic islets, its bluff shore in the pass, and slowly receding shore elsewhere, very far exceed similar advantages offered by Biloxi, Pass Christian, and other watering places on that shore.

On the island of Grande Terre is situated Fort Livingston with a dozen or more houses belonging to the Government, some of which are occupied by its officers and agents with their families, whose kindness and hospitality to persons visiting the island, is remembered by many. There is besides, the plantation of Mr. Gordon and the summer residence of Mr. Robert Wilkinson.

In addition to all the well known sports of fowling, fishing, sailing, &c., it may be interesting to mention here a new species practised on the islands. On first reaching any one of them not inhabited, you find large quantities of eggs dropped by the innumerable thousands of sea-fowl which fill the air and water, and whose cries almost deafen the intruder: in order to obtain with certainty those that are fresh, the eggs found on landing are all broken. In the course of one day and night many bushels may be gathered, of the size, and answering all the purposes of hen's eggs, and by some preferred.

There are in the parish of Plaquemines, 46 sugar plantations, with 4,250 slaves, which yielded last year about 12,060 hogsheads of sugar, and 580,000 gallons of molasses. Ten of that number are prepared with apparatus, and are making white sugar of fine quality. There

are 238 rice plantations, yielding about 15,000 barrels of cleaned rice. Upwards of 500 men are engaged in the oyster trade, 150 of which number fish the oysters from the bays, the rest are employed in conveying them to New Orleans. For this purpose 170 small luggers, sloops, and schooners of from 5 to 15 tons burthen, are in use for five months in the year. During the summer months they find employment in carrying shells from the islands to the forts and to the city. These made into concrete by a mortar of lime, sand, and hydraulic cement, make the most substantial and imperishable wall known. For public works in progress of erection, the city streets, and ornamental walks at private residences, the demand for shells affords good summer employment for this class of persons. From the best information to be had on the subject, the parish of Plaquemines sends a weekly supply to the city of New Orleans, of at least 4,000 barrels of oysters, amounting during the season to about $100,000.

Art. IV.—THE CIVIL LAW,—FROM HIENNECCIUS.*

Section 36. Since at first the chief priests and the jurists had all these things, i. e., forms of legal proceedings, in secret, Cn. Flavius, the scribe of Appius Claudius, made them public; and this collection was called the Flavian Law.

Section 37. For this cause the jurists being indignant, and fearing that their former influence in the forum might be diminished, composed nine formulæ, and kept them in their houses, written in unintelligible characters. But, truly, even these mysteries were made public by S. Ælius Catus, a man remarkable for prudence, the author of the Ælian Law, from which the Tripartita, or *Three Parts*, of the same seem not to have been different.

Section 38. From the time the Decemvirs passed the laws of the twelve tables, various laws and various decrees of the commonwealth came forth, by which something was added to those laws, or they were explained or amended, in which number was principally the *Aebutian Law*. P. Manutius, A. Augustinus, F. Holomannus, P. Memla, have written of the laws and decrees of the commonalty.

Section 39. And laws also were passed by the whole people, the Senate and the commonalty. A magistrate of the Senate introducing the

* Continued from October Number Commercial Review.

law, whence, also, they are called by Tacitus, DECREES OF THE PEOPLE. On the other hand DECREES OF THE COMMONALTY were ordinances confirmed by the votes of the commons, a plebian magistrate introducing the measure as a tribune of the commons. Concerning the manner of passing laws, we have spoken.

Section 40. But decrees of the commonalty also began to be called LAWS. After this was secured, first, by the HORATIAN LAW in the 304th year of the city; then by the Publian Law, in the 414th year, and finally by the HORTENSIAN LAW in the 456th, that which the commonalty had commanded by tribes should bind the people.

Section 41. Moreover, from the year of the city 489, in which Prætors and Curule Ædiles began to be recognized in the city, a new accession was made to the laws by EDICTS OF MAGISTRATES, in the management of honors concerning things pertaining to the jurisdiction of each, being proposed yearly by the Prætors, the Governors of Provinces, and the Curule of Ædiles.

Section 42. To these decrees many alterations were made for the sake of aiding, of completing and of correcting the civil law, and with a show of public utility. Hence 1. *New words* invented against the fraud of the ancient laws, for example: Bonorum possessio,* Constitutum,† Hypotheca.‡ Hence 2.‖ New actions§ opposed to the principles¶ of the civil law, as the Publician and Paulian. Hence 3. Restitutions in integrum. Hence 4. Exceptions made to transactions invalid by the civil law. Hence 5. Lastly, all fictions such as you have in sec. 4, 5th inst. de act.

Section 43. And although magistrates are not legislators, yet their edicts having been approved by the customs of the forum, have at length obtained, on account of their antiquity, the authority of written law, and have been called *jus honorarium*, which is said to be the living voice of the civil law.

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* The right of suing for or of retaining a patrimony or thing which belonged to another at the time of his death.

† He was still to be constituted who obliged himself to pay what he or another owed.

‡ Mortgage.

‖ This action took its name from the Prætor Publius, and was given to one who obtained possession of a thing in good faith, and had lost the possession before he had acquired the ownership by usucapion.

§ This action was accorded to creditors to reclaim the goods which their debtors had aliened in fraud.

¶ This term signifies the rescinding of a contract or transaction, so as to place the parties in the same position that they occupied before it was made.

Art. V.—PUBLIC EDUCATION.

LOUISIANA STATE UNIVERSITY.

STATE Universities, wherever they have been established, have never been able to support themselves without assistance from the State, nor do we believe that our new University, about to be established, will be an exception to this rule, which all others, thus far, have followed. Assuming then, that the State University will ever be a certain expense, greater or less, to the State, it next becomes, since it must be established and supported, important to inquire what plan of establishment will secure to the greatest number the greatest amount of benefit?

Viewing all schemes based upon the supposition that the University can be made to support itself by the tuition of the students as entirely visionary, and contrary to all experience in such institutions, we would propose a plan entirely different from any now adopted in the United States, and the only one, too, which we believe can offer the greatest amount of benefit to all, without distinction. It is this: having erected the University buildings, and furnished the nucleus of a library, together with all the necessary chemical, philosophical and other apparatus, let the following Professorships be established by the State:

MENTAL AND MORAL PHILOSOPHY,
NATURAL PHILOSOPHY AND ASTRONOMY,
MATHEMATICS,
GREEK AND LATIN LANGUAGES,
MODERN EUROPEAN LANGUAGES,
ORIENTAL LANGUAGES,
CHEMISTRY, PHARMACY AND MINERALOGY,
GEOLOGY AND NATURAL HISTORY,
HISTORY, ANCIENT AND MODERN,
LAW,
INSTITUTE OF MEDICINE,
MATERIA MEDICA AND GENERAL THERAPEUTICS,
GENERAL, DESCRIPTIVE AND SURGICAL ANATOMY,
THEORY AND PRACTICE OF MEDICINE,
PRACTICE OF SURGERY,
OBSTETRICS.

Of these sixteen professorships, let the first nine be paid each a salary of $2,000 per annum, which would require an appropriation from the State of $18,000 per annum to sustain the University. *Let then, the*

lecture rooms of the University be thrown open to all, free of expense, so that all, rich and poor, without distinction, can enjoy the benefits of the University to any extent.

To pay the incidental expenses of the University, let all students who attend the lectures and examinations, for degrees, pay the sum of twenty-five dollars per annum to the treasurer and librarian of the University. The twenty-five dollars per annum being the only expense to the student, large numbers would flock to the University from all quarters, and we might safely assume that at least four hundred students would pay the above fee, which would amount to $25 x 400 $10,000; more than half the amount of the whole appropriation! Even three hundred students would be seven thousand five hundred dollars, so that by this plan the actual expense to the State would, at most, be small.

Even if the University required annually an appropriation of twenty thousand dollars, this amount would be cheerfully paid by the people, since all could enjoy the advantages of the institution free of any University charges.

The Professors of Law and Medicine, although appointed by the State, by the plan which we propose, would rely for their support, as now, upon the usual fees of their respective classes, for the present, at least, without any compensation from the State. It would be quite too much to require the State to defray the expenses of the professional education of our lawyers and doctors.

We make no provision, as it will be observed, for a PRESIDENT to the University, with a high salary, as usual. We believe it a bad arrangement, as well as an expensive one. The best method undoubtedly is, to require that the professors shall choose annually from their own body, a President, who in consideration of his additional duties, be allowed the sum of, say five hundred dollars per annum.

Such is the University we propose. Should the plan be adopted, it would not only serve all the purposes that could be required as a University, but it would be more certain to sustain itself than any other institution established on any of the usual plans. Admitted to all its departments, free of expense, thousands would flock to our city from all quarters, to attend the lectures of the Professors, and a new era would be commenced in the history of American Universities. Louisiana would enjoy the honor of having first introduced into America the plan of free Universities, and the city of New Orleans would become as distinguished for its science and literature, and the liberal encouragement of learning, as it is now for its commerce and the liberality and enterprize of its citizens.

Our new Constitution declares that we shall have a University for the benefit of the citizens of this State; but if it be established on any of the plans now adopted in America, we cannot see how the institution can be made available for the benefit of the people at large, even in the vicinity of its location. In none of our American Universities are there admitted students gratuitously, and in all of them the fees are too great for any except the rich, even though they may live immediately in the vicinity. Let us suppose that the new University was established in the city of New Orleans, on the plan of any of our American universities, what proportion of our population could enjoy its benefits. Thousands of the sons of our most worthy citizens could never enter its halls, at the same time, as citizens, they would be compelled to bear their portion of the University expenses. The institution would not, on such a plan, be able to sustain itself by the fees from the few who would be able to pay them, and the inevitable result would be, that a large appropriation annually would be required from the State, and all for the benefit of the professors, and a very small body of students. Not more than one person out of ten thousand in the State would ever attend the University, as can easily be seen by comparing the number of students in other Universities with the population of the States by which they have been established.

Such then being the certain operation of a University established on the usual plan, the design of the Constitution to diffuse knowledge extensively among the people would be, to a great extent, defeated. The great majority of the people would be compelled to support an institution which they could not enjoy, and the money of the poor would be appropriated to sustain it for the benefit of the rich.

It is a principle that should never be neglected in all appropriations of the money of the people that *the benefits arising from such appropriations should be universal, or as nearly so as possible.* Neglect of this principle is manifestly unjust, since it is taking the money of one portion of the people to give to another. Fortunately, the establishment of a State University is a measure which presents no difficulty in the application of the above principle; for, as I have shown, the institution can be established and sustained on a plan by which all can enjoy the full benefit of it gratuitously. If the plan which I have proposed be adopted, thousands of young men who are now driven by their poverty from all colleges and universities in our land, and many of whom are possessed of the highest natural endowments, and who would become bright ornaments to society, had they the means of improving their minds by the acquisition of knowledge which they so eagerly desire,

would throng to our city from all parts, who are now deprived of these high advantages, and for the want of them would live and die in obscurity; their natural talents, that might be made subservient to the best interests of society and their country, wasted, and their minds and morals corrupted, would be found in our University halls, fitting themselves for good and useful citizens.

And if the State University should be located, as it assuredly ought to be, in the city of New Orleans, and should be supplied with a body of able professors, it would not only be a high honor to the State of Louisiana, but from the great influx of students, would contribute immensely to the interests of the city. Able faculties of Law and Medicine would attract vast numbers, and there can be but little doubt that the number of students who would annually pay the small fee of twenty-five dollars, would be very great,—greater, in all probability, than the greatest number of students at any college or University in the United States.

Even if the amount received for fees did not equal the expense of the nine Professors, the State appropriation then would not be more than that required if the University were established on the old plan; for it is quite certain that there are at least four times as many who are able, and who would pay twenty-five dollars each, as there are of those who can afford to pay the usual University fees. So that, on the plan proposed, there would be at least as great an income from fees as on the exclusive plan, which only admits the few, with this further and great advantage, that *all, without exception, may constantly enjoy the benefits of the University.*

Such being, then, the manifest superiority of a free University, we are unable to anticipate any objections that could be urged to it. It would seem that every citizen of Louisiana would hail with enthusiasm such a University, in which, without sending his sons out of the State, he could see them educated under eminent professors, *free of charge;* the heavy expense of sending them to the North, where they are entirely removed from his control, being thus avoided. And all this too, at the expense to the State of only ten or twelve thousand dollars, at most, on the supposition that no University fees were received,—a supposition which I have already shown cannot be entertained.

This plan of a free University, as all know, is nothing new,—no new experiment to be tried, and therefore not objectionable on this ground. It has long existed in Europe, as all are aware who are at all acquainted with colleges and universities in France. The *University of Paris*, so celebrated, with its four faculties, composed of some of the most learned

men in the world, is a University on the plan which I propose. All its lecture rooms are thrown open to the public, and are thronged with students from all parts of the world. The *College of France*, many of whose professors are so well known to the scientific world, is also on the same plan, and its *Lectures du Roi* delight and instruct vast multitudes by their gratuitous lectures. To the *Museum of Natural History*, in the *Jardin des Plantes*, at Paris, are attached *thirteen* learned professors, who lecture gratuitously on different departments of Natural History, Chemistry, Agriculture, etc. At the *Bibbliotheque du Roi* also, on Oriental Literature; at the Royal School of Fine Arts, on Painting, Sculptor, etc.; at the *Conservatoire des Arts des Metiers*, on various branches of practical science, are constantly delivered to the public gratuitous lectures by the most able professors. Thousands from America and all parts of the world annually visit Paris for the advantage of its free literary and scientific institutions.

We thus see that the plan of making the University of Louisiana free to all who may wish to attend its lectures, is nothing new: no wild dream, but a plan which has been long adopted, and which has now the admiration of the civilized world for years. France, with her free colleges and universities, has for many years instructed thousands gratuitously, while other nations, on the old plan, have only instructed hundreds. The plan proposed is new, it is true, in the New World, but it is none the worse for that; and we trust that our Legislature, in establishing the State University, will not hesitate on that account, and thus deprive Louisiana of the honor of originating the first free University in America. Let us have a free University, since we can have such a one quite as easily as any other; and then, while all can enjoy its advantages, there will be none who will refuse to support it.

It is quite unreasonable to expect that any of the plans that have hitherto been adopted in America for universities, will succeed in Louisiana better than elsewhere. Indeed there are a variety of reasons that might be enumerated why they would not succeed as well here as elsewhere, but the great cause of the failure of state universities, has been that they have been invariably established upon plans by which their benefits were available only to the rich, at the same time that all were taxed to support them. This arrangement, manifestly unjust, has only served to keep up loud clamours of the people against the universities, and to create every species of opposition to them, and this opposition has been persevered in, in most cases, as to materially injure the prosperity of the state universities, and in some instances to ruin them entirely.

Let us, then, discard all these old plans, and try one which, at the same time it will not be more expensive to the state, will be free to all, and thus have the cheerful support of all.

It is impossible to contemplate, too, such a university without perceiving the great advantages that would flow from it, to whatever place may be selected for its location. The vast influx of strangers from every quarter as to the schools of Paris, would contribute greatly to the wealth and commerce of the place, and benefit every class of society. Should it be established in New Orleans, the only place in Louisiana fit for such a university, the influx of strangers would be at least doubled, and our city would become renowned for its free university. We are about to have free schools established throughout the State, and all that is necessary to make our educational system complete is a *free university*. We ardently hope that the plan we have proposed above will meet with a share of the attention of our honourable legislature now in session, and that they will give the State of Louisiana the honor of establishing the first free university in America. Superior now as its commercial advantages are to those of any other city in the United States, it would then be superior to any other city in its literary and scientific advantages, and the current now running from the South to our northern universities would be turned back to New Orleans, whose delightful climate for at least as many months in the year as are usually devoted to study in universities, would render it a place superior to any other in the United States for the student. Here, in our balmy southern clime, not surpassed by that of Italy or any other country, the student would escape the rigors of a northern winter, and pursue his literary and scientific studies with improving health.

The minor details of such a university we cannot now dwell upon; and for the present we shall content ourselves with saying that they present no difficulty whatever. Let but the plan be adopted, and all else pertaining to it would be easy. The people will then have a university which they can all enjoy and cheerfully support.

Art. VI.—NOTES ON THE GEOLOGY AND MINERALOGY OF ALABAMA.

Part First.

The main design of the writer of this series of short articles is, to present a plain, brief, comprehensive view of such mineral resources of Alabama as might be made to produce decidedly beneficial effects on agriculture, manufactures, and commerce. He will, however, often

describe phenomena, and thence deduce inferences interesting to scientific and literary persons only.

In accomplishing this design, the reader will be presumed to be acquainted with the elements of geology, and hence technical terms will be used, and principles of science assumed, without defining the former, or explaining the latter.

The method adopted is to begin with the most recent alluvial deposits, now forming, chiefly at the mouths of rivers, in the Gulf of Mexico, and to proceed thence across the strata, (all of which dip from north-west to south-east,) from the tertiary in the southern, and the newer secondary in the centre and western to the older secondary and primary stratified rocks in the northern and north-eastern parts of the State. In this way, it is believed, a practically useful as well as interesting outline of the geology and mineralogy of the State can be best given, describing incidentally, as occasion may seem to require, hydrology, and other facilities for manufactures, mineral waters, and artesian wells.

The total absence in Alabama of particular rocks and of important groups or formations, that occur in those parts of the earth's crust where the known series of strata is complete, will be noticed; for such notice will indicate clearly to persons acquainted with geology, that the State can never supply for the advancement of art or science, either the minerals or organic remains peculiar to such rocks and formations. Thus, neither the rocks, granite, syenite, porphyry, basalt, serpentine, nor the formations, lias, oolite, wealden, miocene, pliocene, have been found; and, if they exist in Alabama, they must be very limited in extent, or concealed from view by other rocks.

A description of Mobile Bay, including its islands, coasts, and adjacent lands, will give a correct general idea of the geological character of the alluvial and post-pliocene strata, on the whole southern boundary of the State.

Mobile Bay, more than ten miles broad and thirty long, bounded by low, sandy shores, and studded with numerous small islands, is very shallow, often only a few feet or even inches deep. It receives annually from the Alabama and Tombigby rivers and their tributaries, flowing from all parts of the interior, immense quantities of fine sand, mud. drift-wood, and other things, some of which are spread over its bottom, and envelope, near the mouth of the river, shells of the unio and other fresh water mollusca; lower down, those of gnathodon, neretina, and other tenants of brackish water; and, finally, those of the strombus, conus, murex, cyprea, and other marine genera.

Hence, this bay presents to a geologist a singularly interesting and instructive spectacle,—the simultaneous formation over a limited area of a continuous alluvial bed, containing in one part fresh-water, in another marine, and in another brackish-water remains.

In such a situation, the geologist sees in ceaselessly active operation, agencies which formed in past geological eras, many extensive rocks, now elevated into broad plains or high mountains. In such rocks he has been able to read the successive changes in the condition of the earth, —where shallow or deep seas prevailed; where estuaries, lakes, or bays existed; whence rivers ran; what animals inhabited particular regions, and what vegetables grew on the land.

When I first saw the islands in the bay, I inferred that they were of comparatively recent alluvial origin, caused by materials drifted from the river, for they are surrounded by vast accumulations of logs, and are covered to the water's edge with a dense, luxuriant growth of grass, shrubs, and small trees, the latter being wholly different in size and character, from the pines, oaks, live-oaks, bays, and poplars, seen on the adjacent coasts. Subsequent examinations convince me that they existed before the human era, and that, though the bay is gradually filling up, the process is exceedingly slow, most of the drift-wood decaying rapidly in so warm a climate, and much of the finely connected mineral matter borne into it by the river, but kept suspended by winds and tides, being carried into the Gulf of Mexico. Owing to these causes, the bay probably does not shoal on an average more than an inch in a century. The geological evidence on which these inferences rest, will be given in the sequel.

On each little island is a solitary hut, occupied, I believe, by French or Spanish creoles, who cultivate a fertile garden and eke out a miserable existence by selling in the city vegetables, fish, oysters, crabs, turtles, and shells for paving streets.

In these fishermen's gardens, I had an opportunity to obtain conclusive evidence that the islands were raised above the level of the waters simultaneously with the lands around Mobile, and on the adjacent coast.

The surface of each island is a thick bed of soft, dark marl, composed chiefly of myriads of shells of a species of gnathodæ which has long been extinct in the Gulf of Mexico, but which still lives farther east on the Atlantic coast. This fact proves the marl to be a post-pliocene rock, similar in age to those on the southern coast of Georgia, in which the bones of the megathenon described by Mitchell, Cowper, Lyell, and Hodgson, were found.

A different species of living gnathodæ is exceedingly abundant in

the waters around the island, but not one of its shells can be found in the bed of marl. Had these islands been formed by alluvial deposits of sediment from the river, and the shells on their surfaces been thrown there by the Indians, as some have supposed, those in the marl would correspond in specific characters with those in the waters of the bay.

It is certain that this gnathodon bed of post-pliocene marl, underlies the alluvial deposit in the bay in all places except those from which it has been washed by the current of the river. On Greenhard's island, four miles from Mobile, and therefore near the center of the bay, I examined a narrow canal several hundred yards long, which had been dug by the fishermen from the edge of the marsh to their huts near the the centre of the island. In the bottom of this canal, from one end to the other, may be distinctly seen the same bed of marl, which rises in the island six or eight feet above the level of the water. It is readily distinguished by its shells from the alluvial deposit above it. The latter is very thin, indicating distinctly an extremely slow process of deposition.

The same gnathodæ bed of marl is found in the bluffs around the bay, and in the beds of streams, and other valleys of denudation in the country around Mobile. Generally, in all this region beds of clay and fine sand repose on it. Its limits have not been accurately ascertained, but enough is known to prove that it is very extensive. Its boundaries, when ascertained, will define the extent of the prevalence, prior to the last elevation of the southern coast of the State, of brackish water similar to that in the bay.

The strata of clay and sand are known by their position on it, to be more recent than the marl. They form some of the sand hills in the immediate vicinity of Mobile. The materials of these strata were probably drifted south from an ancient coast of the Gulf, then much more extensive than at present, by the agitation of the waters caused by the force that elvated the whole region to its present position. The retiring waters cut valleys through the sand and clay in some places, and removed them completely in others. Hence, these strata are not found on the marl in the islands. The materials that formed them on the land, were transported from the islands into the Gulf of Mexico by the current of the river, by waves, and by tides.

This extensive bed of rich marl has supplied shells for improving the streets and yards in the city of Mobile. This, it is believed, is the only use to which it has yet been applied; but as it is covered generally, by thin beds of clay and sand only, and is found on the surface and in streams, in many places, it might be extensively employed in fertiliz-

ing the sand-hills that repose on it. Agriculturists and horticulturists should certainly test, by direct experiments, the effects of spreading from one to three hundred bushels of it on an acre of sandy, poor land. For this purpose it need not consist almost wholly of shells, as must be the case when it is spread on streets, walks or yards. On the contrary, when used as a manure, it would be most efficacious when obtained from parts of the bed containing much fine earth mixed with small fragments of decomposed shells.

The preceding description of strata applies to what the writer saw in the islets in Mobile Bay, in the city, and in the hills and valleys in the immediate vicinity. He believes similar strata exist along much of the southern border of the state. In this belief he may be mistaken. Nor would he be understood as regarding all the sand-hills near Mobile and on the Bay, as post-pleocene strata, more recent than the Gnathodon marl. He had no opportunity of finding or tracing the out-crops of the marl. He saw it, however, several miles north and west of the city. Still it may not extend far into the interior; and subsequent to the final elevation of the whole region, various agencies may have mingled on the surface near their line of junction, sand from the out-crops of beds below the marl with that from those above it. This, however, is a question of scientific interest only. The great extent of the marl in proximity to large bodies of poor sandy lands, is certain; and hence its value as a deposit of accessible mineral manure cannot be doubted. Every acre of the pine barrens, within ten miles of the city, certainly can, by marling, be made durably rich, for a much less sum than the current price of an acre of similar pine land in Rhode Island or Massachusetts where marl for manuring is not found. A few years will prove the correctness of this opinion. Alabama, even now, is so sparsely populated, that an acre of rich land can be purchased for less than marling it would cost; and hence, thick beds of rich marl are regarded as valueless: but the rapid exhaustion of her fertile soils, and the increasing demands of a growing population will, ere long, augment the price of even barren soils. Marl will then be valued and applied, and spots now sterile will be rendered fertile.

Dr. J. C. Nott of Mobile has supplied me with some facts, from which the mineral character of the strata under the city, to the depth of about two hundred feet, may be inferred. These facts were obtained from Mr. Troost and others, who had attempted to procure water by boring Artesian wells.

Mr. Troost's experiment was made near Church street, about fifteen feet above the level of the river. His augur passed through the follow-

ing beds: 1st. Blue marl containing logs and other vegetable matter, twelve and a half feet; 2nd. Fine sand eight feet; 3rd. Coarse white sand with pebbles, ten feet; 4th. Several very thin beds of clay and sand, three feet; 5th. Fine yellow sand, with small concretions of clay, ten feet; 6th. Quicksand 47 feet.

The blue marl, twelve and a half feet thick, is obviously the Guathodon marl, which in different parts of Mobile, rises to the surface. In all such places it contains shells of Guathodon, but the species was different from that, (Guathodon Cuneatus) which now exists in the river and bay.

At the depth of thirty feet in the stratum of sand and pebbles, which lies above the thin alternating layers of clay and sand, Mr. Troost observed that pure water rose three feet in the pipe. This fact is important, for it indicates a difference in the mode of deposition as well as in the edge of the thin subjacent beds of clay and sand.

Mr. Troost found the quicksand very difficult to perforate. The water rose in the pipe thirty feet in one night. Hence, when his augur was lost, at the depth of ninety feet from the surface, the undertaking was abandoned. Other persons had sunk their augurs one hundred and eighty feet; and one individual obtained good water which is still used.

Mr. Hale, who has spent much time in collecting fossils from the Eocene and Cretaceous strata in South Alabama, estimates at two hundred feet, the thickness of the marl, clays, and sands that have been described. If, as I shall presently attempt to prove, they are the same as the *ferruginous sand formation*, they are probably much more than two hundred feet thick, in many places.

The Guathodon marl, and the thin strata of clay and sand that lie above it, may be referred with certainty to the post-pliocene formation now known to occur in many places in the United States. The age and geological relations of the subjacent beds of sand have not been ascertained. They may prove to be the equivalents of either the pliocene or the miocene strata; but they are believed to be the most recent eocene deposits. They consist almost wholly, as has been stated, of sands and friable sandstones, which dip a little east of south, at an angle of inclination not exceeding 15°. And they form where they crop out at the surface, a plain of nearly level sandy lands, over a wide area along the coast, covered, except where savannahs, marshes, and ponds occur, with forests of pine and a rank growth of coarse grass. They present, therefore, very few favorable situations for determining their age by their position; and the difficulty is enhanced by an almost total ab-

sence of organic remains. Still, a few facts have been recorded, which I will now proceed to notice.

In the American Journal of Science, second series, November 1846, Mr. Artemas Bigelow described a bed of friable, ferruginous sand rock, extending from Pensacola along the eastern coast of the Gulf and Mobile Bay, to Washington county, Alabama. Mr. Buckley had previously mentioned it as a rock that occurs in Clarke county, near the locality whence he obtained the remains of the Zeuglodon. In this sand rock, especially in Washington county, east of the Tensau river, very remarkable "sand-stone tubes" are abundant, from one to twelve inches in diameter, and six, eight, or ten feet long. Each tube is filled with ochre or sand; and sometimes contains portions of silicified wood. From their number, size, horizontal position, and fragments of silicified wood, Mr. Bigelow infers that they were formed by cementation of sand around trunks and branches of trees, drifted south by a river and deposited at its mouth.

I have several of these tubes from Washington county in my possession, which were given to me by Dr. Hamilton of Mobile. They correspond in all respects with those described by Mr. Bigelow; and, before I saw his article, I inferred that they were formed in beds of clay and sand around roots which subsequently decayed, the resulting tubes being filled by sand and the oxide of iron. As he saw them in many places in the rock, all parallell to the lines of stratification, his conjecture is probably correct.

In one place, he saw in the sand rock, "abundant but very obscure impressions of several genera of shells, apparently all bivalves." As he has not given even the generic names of the shells, their impressions, like the tubes, throw no direct light on the age of the rock.

He has shown, however, that it underlies the marl in the bay, and probably forms the beds of sand under Mobile; for, after stating that, where he saw it, it is more than one hundred miles long and fifty wide in its broadest part; that at the distance of a few miles it often attains an elevation of two hundred feet above the river, and that it is generally covered by beds of clay, except where it has been cut through by valleys of denudation, he states that, at the distance of two miles inland, it begins to slope down into Tensaw river, the eastern side of Mobile Bay. Thence, doubtless, it passes under the marl seen in the islands, in Mobile, and in the immediate vicinity. And if, as may be inferred from the "sand-stone tubes" found in both, it extends up the river to Clarke county, where Mr. Buckley saw it, it is unquestionably the *ferruginous sand and clay formations* described by Mr. Lyell, as oc-

curring in South Carolina in Georgia, and in south Alabama, in which latter he saw it, near Claiborne, Suggsville, and St. Stephens, lying on the *nummulite limestone*, now known to be one of the most recent eocene strata though, on the authority of Conrad and Morton, it had been represented as a secondary rock.

When I saw him, in February, 1846, Mr. Lyell, an experienced, cautious geologist, had not been able, owing to its want of organic remains, to fix the age of the ferruginous sand-rock; yet he was inclined to regard it as the most recent eocene stratum. My own observations made soon afterwards, induced me to adopt his opinion, for, besides what I had seen in South Carolina and Georgia, I found, last April, on the eocene, nummulite limestone at St. Stephens, numerous *indications* of an extensive bed of ferruginous sand-stone, similar in all respects to those which are commonly found in the *feruginous sand and clay formation* in South Carolina, Georgia, and Florida. What is more applicable to my present purpose is, that the sand-rock at St. Stephens is identical in lithological characters with the "sandstone tubes" found by Buckley and Bigelow, from Suggsville to Pensacola.

If these views are correct, the *ferruginous sand and clay formation*, (the most recent eocene deposit,) lies, geologically, below the alluvial and post-pliocene strata around the Gulf ofMexico, and below the nummulite, tutiary limestone at St. Stephens and other placesin South Alabama. It forms, therefore, on the southern boundary of the State, a broad belt of low sand-hills, such as are seen between Mobile and Claiborne or St. Stephens.

The whole region is destitute of valuable minerals. Neither precious gems nor metallic ores can be sought in it with any prospect of success.

Some of your readers may think this article would suit better a scientific journal. Nothing could be further from the truth. Science is the basis of arts, manufactures, and commerce; and a scientfiic principle clearly explained and generally understood, may cause the wise investment instead of the foolish expenditure, of millions of capital. Thus, the whole region described in this article, is destitute of valuable minerals, and therefore all expensive searches for gold, silver, iron, or coal, should be avoided. It possesses rich beds of marl, which agriculturalists might advantageously use, and it is covered with immense pine forests which could be occupied profitably by persons engaged in the collection and manufactory of turpentine, tar, resin, and lampblack.

Hence, whether its numerous harbors, its navigable streams, its rich marl, its boundless pine forests, it salubrious atmosphere, or its pure waters be regarded, it possesses superior commercial advantages.

Art. VIII.—THE LOUISIANA OUACHITA REGION.

No. II.

The first inhabitants of Ouachita Europeans, or of European descent, were, as before stated, exclusively hunters; they were without ambition as to the acquisition of wealth. A few, more industrious than their neighbors, added to the products of the chase some means of satisfying their very limited desire of obtaining more than the absolute necessaries of life. The greatest number did not, however, show much inclination to employ their long intervals of leisure in agricultural labors; they spent carelessly the product of their hunting excursions, which sometimes reached to a proportionally considerable amount. One of their favored pastimes was to tie to their hats their hunting-shirts; to the mane and tail of their horses a large quantity of ribbons of all colors, often to the value of one hundred dollars, when what now sells for five cents, was paid for by them at one dollar a yard. The horses and riders thus decorated started together through the prairie at full speed, the ribbons fluttering fantastically in the breeze. This was considered a beautiful show. All were good, honest people, kind and liberal; their hospitality boundless. Of a gay and lively disposition, they were fond of amusements, of these the dance held the first rank; they had balls always once a week, and often twice. The refreshments were coffee, taffia, (New Orleans rum,) and fritters of Indian corn meal, to which was added when the company was numerous, the more substantial beef, or some member of the grunting tribe. The dress of the ladies on these occasions, was as simple as their customs, linen check was the *ne plus ultra* of the fashionable circle, and the first one who appeared in calico was considered as very extravagant, and surely would be ruined by such unheard of luxury.

All this, however, did not last long; when the new families introduced in 1795–7, were settled and gave the example of industry, showing that labor found its reward with far greater certainty when bestowed on the culture of the soil, than by the continually diminishing products of the chase. The plough was then seen in hands previously employed in the sole use of the gun and rifle,—the country gradually

but rapidly assumed another aspect; the fertile land of the prairies were covered with valuable crops, and even the forest soon fell under the axe of the sturdy woodman, commerce increased in proportion, and the farmer can purchase at moderate prices what was before sold to him at enormous rates by merchants who met with little or no opposition. The value of goods annually sold in the small town of Monroe, alone, does not amount to less than two hundred thousand dollars, besides the several stores scattered in the neighborhood.*

Art. IX.—THE CITY OF ST. LOUIS.

The anniversary of the founding of this already great city was celebrated with much eclat on the 15th of February last. The festival was in every sense worthy of the occasion. Would it not be well if the citizens of New Orleans would imitate this example, and recur annually to the same important event in the history of our city, and indeed in the history of the Union.

Wilson Primm, Esq., delivered the address, from which we would extract a few passages of wide spread interest.

1.—Founding of the city.

"On the 15th February, 1764, Laclede and his party landed at the spot now occupied by our city, and proceeded to cut down trees and draw the lines of a town, which he named St. Louis, in honor of Louis XV., of France, a town which subsequently became the capital of Upper Louisiana, and which is now the commercial capitol of Missouri. I could not, in justice to my audience, and on such an occasion, speak of the physical aspect of the country, more than to say, that St. Louis was then a wilderness, tenanted by the prowlers of the forest, and surrounded by untutored and savage bands of Indians, and that for long afterwards the beasts of the forest afforded nourishment, and rude huts on the ground, and scaffoldings in the trees afforded shelter and protection to the generous and daring people who first exposed the bosom of our soil to the genial influences of social industry."

2.—History and Progress.

"From the time of its establishment, up to the year 1768, St. Louis had grown apace. The population had become settled; they had erected dwellings of a com-

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Note.—Among the first inhabitants a few were so indolent, and not always lucky in finding in the forest as soon as wanted, food for their families, that the mothers in order to assuage the cravings of hunger endured by their offspring, used to put a tight belt around the body of their children. Now, as the industrious wife of the agriculturalist is fully occupied, and cannot be constantly watching over her infant, when compelled to be absent, she gives him a piece of fat pork to suck, and as he might choke himself she ties a string of proper length to the piece, one end of which is tied to his foot. If he tries to swallow it, and thus run that risk, his first motion is to kick, and off goes the pork from its dangerous position. This is sufficient to show the difference of industry and ingenuity between the first settlers, who mainly depended on the chase to provide for their family, and the subsequent ones, who, to use a farmer's expression, "raise their own meat."

fortable character, and had improved and cultivated the neighboring lands. Every thing, in short, connected with their position and prospects, warranted the anticipation of a peaceful and happy existence, under a mild and patriarchical form of provincial government.

"In the mean time, however, the fact of the cession of Louisiana, (not the terms of the cession,) had been made known at New Orleans. In 1766, whilst great dissatisfaction then prevailed, the Captain General, Don Antonio D'Ulloa, with Spanish troops, arrived there, and demanded possession in the name of Spain. This was refused, and the people of New Orleans, indignant at a proceeding which had transferred them from hand to hand, like merchandize, droveback D'Ulloa from their shores.

"In this state of *quasi* revolt, the population of Lower Louisiana remained, clinging to their loved government of France, until the arrival of Count O'Reilly, in 1769. The inhabitants of Upper Louisiana, fewer in numbers, and incapable of such resistance as had been manifested by their southern brethren, were compelled to submit to Spanish authority. Accordingly, we find that on the 11th August, 1768, Mr. Rious, a Spanish officer, with Spanish troops, perhaps the very same that had been driven from New Orleans, arrived at St. Louis, and took possession of Upper Louisiana in the name of his Catholic Majesty.

"In February, 1779, Col. George Rogers Clark, under the authority of Virginia, after having struck many severe blows against the British power on this side of the Ohio river, was in the neighborhood of St. Louis, raising men from amongst the French inhabitants of Cahokia and Kaskasia, for the purpose of re-capturing St. Vincent's, now called Vincennes, and which was then in possession of the English under General Hamilton.

"Understanding from the same source, that an attack was meditated upon St. Louis, by a large force under British influence, that too at a time when Spain was contending with England for the possession of the Floridas, Clark, with that chivalrous spirit, which has earned for him one of the brightest pages in American history, at once offered to the Lieutenant-Governor, Leyba, all the assistance in his power to repel the contemplated attack. The offer of assistance was rejected on the ground that no danger was really apprehended.

"In my former sketch of the history of St. Louis, I had placed the time of this offer by Clark in 1780. Satisfied that it was made anterior to that year, and whilst he was raising troops for the recapture of Vincennes, I am not, however, permitted to withdraw the statement that such an offer was made. The testimony of witnesses then living, upon whose authority it was then made, leaves in my mind no room to doubt the correctness of the *fact*. In this too, I am borne out by the authority of Stoddard, in his historical sketches of Louisiana.

The territory on which St. Louis stood, and that on which several other towns had been located, and the surrounding country, were claimed by the Illinois Indians, but they had acquiesced in the intrusion of the whites, and had never molested them. But when the rumor of an attack upon the town began to spread abroad, the people became alarmed for their safety."

3.—Transfer of St. Louis to the United States.

"Upon the transfer of the country from Spain to the United States, the introduction of American authority necessarily increased immigration of the Anglo-Americans, and the population slowly, but steadily augmented in numbers. On the 26th day of March, 1804, the country was constituted a District of the United States, under the name of the District of Louisiana, and on the 19th day of October of the same year, William Henry Harrison, then Governor of the territory of Indiana and of the District of Louisiana, instituted the American authorities here. On the 4th of July, 1805, this country was erected into a territory of the United States, by the name of the Territory of Louisiana, and on the 4th of June, 1812, it received the name of the Territory of Missouri. §

"We have now to arrive at a period when a new era was to dawn, not only on St. Louis, but upon all her northern and western dependencies, when a power, greater than that of the fabled lamp of Alladin, was to be brought into requisition, and by its magic, to mature, as it were in a day, in the western wilds of America, an existence which, on the shores of the eastern continents, the lapse of centuries had not been able to produce.

"In 1817, the 'General Pike,' the first steamboat that ever ascended the Mississippi, made its appearance at St. Louis. Those who lived here at that time, can well

remember the fear and consternation of the people who saw the craft, breasting the sturdy current of the river, without the help of sail or oar, and they can also bear in recollection the execrations and forebodings of the nervous and hardy voyagers, who felt and knew that the days of the *warp* and *cordelle*, and of the *red feather in the cap*, were to pass away. The stoutest man of a keel boat, usually placed in his hat or cap, on landing, a scarlet feather, which was the *gage* of battle to any one on shore who would dispute his title to superior manhood."

4.—Admission into the Union.

"Passing over the fierce discussions which eventuated in the establishment of Missouri as one of the confederacy, 1820, we come to the year 1822, when St. Louis, by legislative enactment, was erected into a city by the name which she now bears. Since that time, what wonderful changes have taken place? Working her way to importance and greatness through all the impediments which have been opposed by the neglect of the general government, and the tardy and grudging action of the State, of which she ought to be the pride, and is the chief support, St. Louis has still maintained her onward and upward flight, like unto the noble bird, which by its own power and strength, unsustained and unsupported, floats majestically over the storm clouds of the sky.

"The advantages of education, the lights of science, the blessings of religion, placed within the reach of all; the establishment of a wise and vigorous municipal government, under the auspices of which her limits have been enlarged and her interior improved and embellished; the erection of manufactories, the extension of the arts, the regulation of commerce. All these results, so well known and appreciated by those who hear me, have flown from the natural resources of St. Louis, and the intelligence and enterprise of her citizens. She has now a name and reputation abroad of which we may all be proud. Let it be our care always to maintain them, so that hereafter, when away from our homes, the title of citizens of St. Louis may be more potent even than that which, in ancient times afforded protection to the citizens of Rome."

5.—Steam navigation to St. Louis and on the Missouri.

"Up to this time communication with New Orleans was rare and difficult, and although Spain claimed the exclusive navigation of the Mississippi, yet she was not able to protect her subjects from the rapacity of the amphibious pirates who infested that river. The early efforts of the citizens of Virginia, from 1769, and the hardships and dangers which they encountered in attempting its navigation, bear me out in saying that a trip from St. Louis to New Orleans, was more arduous than a trip would now be to China. Now we have steamboats which waft us with a velocity that seems almost to annihilate distance. Even the short interval of five days from New Orleans to St. Louis, is not considered as any thing extraordinary in the speed of the mighty crafts which stem the bold current of the Mississippi. Then the oar of the hardy voyager alone moved the dull bark against the rapid current, except, occasionally, when the southern breeze would spring up, and filling the sail, permit him to rest from his toil, Besides these natural difficulties, communications with New Orleans was at this time rendered dangerous, from the circumstance that a numerous band of robbers, under the guidance of two men, named Culbert and Maglibray, had located themselves at a place called Cottonwood Creek, 'La riviere aux Liards,' and began a system of depredation which was highly alarming and detrimental to those who navigated the Mississippi. As communication between the two ports could be effected but once a year, the boats were generally richly laden, so that the plunder of them was wealth to the plunderers and ruin to the owners. The gay song of the voyager, as he kept time with the stroke of his oar, was the signal for the robbers to rush from their retreat. Armed at all points, they seized upon the vessels, and compelled the astonished and terrified crews to run them to shore. There they would divest them of all that was valuable and leave them at liberty either to continue their route, or return to their place of departure. This system of pillage was carried on with success; it was rare that a boat passed these robbers unseen, and seldom did they see one which they did not pillage."

6.—First Steamboat on the Missouri river.

"FRANKLIN, (Boonslick, May 19, 1819.

"ARRIVAL OF THE STEAMBOAT.—With no ordinary sensation of pride and pleasure, we announce the arrival this morning, at this place, of the elegant steamboat Inde-

pendence, Capt. Nelson, in seven *sailing days* (but thirteen from the time of her departure) from St. Louis, with passengers and cargo of flour, whiskey, sugar, iron castings, &c., being the *first steamboat that ever attempted ascending the Missouri.* She was joyfully met by the inhabitants of Franklin, and saluted by the firing of cannon, which was returned by the Independence.

"The grand *desideratum*, the important *fact* is now ascertained, that steamboats can safely navigate the Missouri."

Art. X.—MOBILE AND OHIO RAILROAD.

THE CITY OF MOBILE.

THE project of connecting the city of Mobile with the Mississippi river, at the junction of the Ohio river, by a railroad, and from this point of extending the railroad to the city of St. Louis, proposed by M. J. D. Baldwyn, Esq., has commanded the serious consideration of the citizens of Mobile. A large and highly respctable meeting was held at Mobile on the 11th ult., at which great enthusiasm was displayed, and a committee of fifty-six, consisting of the most influential gentlemen of Mobile and of the States of Alabama and Mississippi, were appointed to adopt means for obtaining all necessary information, and for accomplishing a preliminary survey and estimate of the route. This committee have gone to work with a proper spirit, and their activity and intelligence give every assurance that no efforts on their part will be spared to bring the subject fairly and properly before the public.

The fame of this undertaking has extended beyond Mobile; the curiosity of the enterprising citizens of the South and West has been aroused, and many inquiries have been made with regard to the objects intended to be accomplished by this great enterprise. In order to satisfy these inquiries, through your journal, you have honored me with the request that I would furnish you with a description of the proposed route of the road. Notwithstanding the limited means of information at my command, I will endeavor to comply therewith.

Commencing at the city of Mobile, the route projected is in nearly a North direction, diverging slightly to the West, on the comparatively level lands dividing the waters of the Mississippi from those of the Tombigby and Tennessee rivers, through the southwestern portion of Alabama, the eastern and north-eastern parts of Mississippi, the western district of Tennessee, and the southwest corner of Kentucky to the Mississippi river, at or near the junction of the Ohio. At this point, it is suggested to cross the Mississippi river by a steam ferry, similar to that over the Susquehanna on the line of railroads between Philadel-

phia and Baltimore, and to extend the road on the west bank of the Mississippi, to the city of St. Louis.

The distance from Mobile to the junction of the Mississippi and Ohio rivers on this line, would be about four hundred and forty miles, and from the mouth of the Ohio to the city of St. Louis, about one hundred and fifty miles, making the total distance from the city of St. Louis to the city of Mobile, equal to about five hundred and ninety miles.

A glance at the map of the States through which this route is projected, will indicate that from Mobile to the mouth of the Ohio, there is not a river or stream of any magnitude to cross, and that on the west bank of the Mississippi river up to the city of St. Louis, there is only one river, the Maramec, to overcome.

In the present communication, it is proposed to say nothing of that part of the route between the city of St. Louis and the mouth of the Ohio. There can be no doubt that as soon as a continuous line of railway exists from the waters of the Gulf of Mexico to the Mississippi, at the junction of the Ohio, the citizens of St. Louis, anxious to partake of the advantages of railroad communication, will be ready to meet it with a railroad from their city to the west bank of the Mississippi.

St. Louis is the great depot of the vast productions of the Upper Mississippi and Missouri. She receives and distributes supplies for an immense extent of territory, exceedingly fertile in the production of articles which must be transported to markets other than those afforded at home. Her navigation to these markets is at all times dangerous, interrupted frequently by the shifting of channels, and the accumulation of snags, and for weeks in the winter season, entirely closed by ice. Her interests will, at no distant period, even if they do not now, point out the necessity of having constant intercourse with the south, uninterrupted by low water, by ice, or by the numerous dangers of river navigation.

For eighty or one hundred miles, the country north of Mobile, through which the railroad will pass, is described to be a comparatively level sandy region, very favorable for railroad making, and covered with yellow pine, of matchless height and straightness, affording timber of excellent quality in sufficient quantities to construct the road in its progress through it.

Thence through Mississippi, Tennessee and Kentucky, where the line will run, the natural surface of the soil is said to offer no obstacles to obtain a straight route of easy grades, without heavy excavations or embankments. The character of the grading will be of the easiest description, there being no rock to encounter except at the northern

termination of the route, near the Tennessee and Ohio rivers. Through the eastern part of Mississippi the route will pass over prairies from five to ten miles wide, and from twenty to thirty miles long. From surveys made for railroads through the western district of Tennessee, the natural level of the country is represented to offer so many desirable routes in this respect, that the chief difficulty will, perhaps, be in selecting the most favorable. Parallel to the Mississippi and Tennessee rivers are two ridges of highlands, on either of which the road might be located to advantage.

As we emerge from the pine lands of the south, the locust, water oak, sassafras, cypress, and in some places the cedar, grow in great abundance, and will furnish timber of excellent quality, and in sufficient quantities for superstructure.

On the southern portion of the route, judging from the cost of railroads over similar sections of country, the average cost of road formation will not exceed twenty-five hundred dollars per mile. In the middle and northern portions of the route, where the country is more broken, the soil more difficult of working, and where frost has to be guarded against, the average probable cost of road formation will not exced four thousand dollars per mile.

The nature of the business which this railroad will transact, requires that the superstructure should be substantial and well arranged. Experience on other roads having much trade and travel, has shown that it is false economy to adopt a light rail and superstructure. The cost of a good superstructure for a single track, with the H rails weighing 50 lbs. to the yard, may be estimated at $10,000 per mile.

At the foregoing rates, the following will be the cost of the railroad:

Preparation of road bed,	100 miles,	cost 2500, -	$250,000
do. do.	340 "	" 4,000, -	1,360,000
Superstructure,	440 miles,	cost $10,000, - -	4,440,000

To this amount may be added $1,000,000 for right of way, turn-outs, water stations, depots, locomotives, cars, and contingencies, making a grand total of $7,050,000 to place the road from the city of Mobile to the Mississippi river at the junction of the Ohio, in a working condition.

This, in the absence of results from actual inspection and instrumental examination, may be considered a fair estimate. It is believed by many that this estimate is too large, but in ascertaining the advantages to be derived from an enterprize, it is always more safe to give the benefit of doubts to that side which allows the highest estimate for the execution of the work.

The city of Mobile, selected as the terminus of this great enterprize, besides being the nearest point on the waters of the Gulf of Mexico to the junction of the Mississippi and Ohio rivers, possesses advantages over all other cities near the Gulf to satisfy the requirements of such a position. Situated on the Bay of Mobile, at the mouth of one of the three rivers which discharge their waters into the Bay, and which drain an area of over 40,000 square miles of land, a great part of which consists of the most fertile cotton growing lands, it presents unrivalled facilities for a great and growing city. Its site open to the cooling and refreshing breezes from the Bay, is on a sandy slope, gradually rising from the river's edge to 15 or 20 feet above common stage of water, which usually does not vary more than one and a half feet. Immediately in the rear of the city, is a plain exteding five miles back to a ridge of sand-hills known as Spring Hill. The sub-soil of this plain is clay, and affords an excellent foundation for rich and productive gardens, yielding with little attention vegetables in great abundance at all seasons. Its game and fish market surpasses that of any southern city, and the common necessaries of life are cheap and abundant. The health of Mobile will favorably compare with any southern sea-port, while during an epidemic, strangers who are only liable to it, can avoid its influence by an hour's drive into the country on the sand-hills, where they are as free from contagion and in as healthy and pleasant climate as at the north. In this respect, Mobile has advantages possessed by no other southern sea-port. An abundant supply of pure and wholesome water has likewise been introduced, which has materially added to the health and comfort of the citizens. The streets have generally a fall towards the river, and can be easily kept clean and pure.

The harbor of the bay of Mobile below the city is well sheltered and capacious, with sufficient depth of water for the largest class of cotton vessels, drawing nineteen or twenty feet, to enter with safety. Vessels drawing from eleven to twelve feet can come to the wharves of the city. The obstructions which prevent the approach of larger vessels are caused by the deposits of rivers emptying into the Bay, and might be removed by a judicious system of improvements.

Mobile is better situated for the Texas, Mexican, and West India trade than any other southern seaport. The usual class of vessels trading with the West Indies and the ports on the Gulf, can always be at the wharves of the city, and are not subject to the delays and expenses attending the towage up the swift current of the Mississippi. The sugar planters on the rivers and bays discharging into the Gulf,

from the Balize to the Sabine river, prefer to send their produce to Mobile rather than to New Orleans for the same reason.

Even if the obstructions to the approach for vessels to Mobile were removed, the captains of the large cotton ships assert that they would rather remain at anchor at the lower harbor, and receive their cargoes by lighters as at present. Their vessels are anchored in a well protected and capacious harbor, in a more safe and secure position than at the wharves of the city, they have no dock charges to pay, and they can keep their crews in perfect subordination and health, and removed from the temptation of the city, at all times ready to perform their duties. In other respects their expenses are light, and enable them to wait for advantageous freights.

As matters now stand, it can be shown that a vessel can be loaded and sent to the Gulf of Mexico from Mobile at a less expense than from New Orleans, with the further advantage that from two to three feet more water can be brought into the harbor of the bay of Mobile than over the bars at the mouths of the Mississippi.

Mobile is now the second cotton exporting city in the Union. The amount in this article alone ranges from fourteen to sixteen millions per annum, while her importations of merchandize from foreign ports amounted in 1844 to nearly $400,000.

We repeat, therefore, that as the terminus for a great railroad, destined to supply with groceries and with foreign goods, a vast extent of country between the Mississippi and Tombigby rivers, and eventually, to supply the fertile regions to the west of the Mississippi river, of which St. Louis is the central depot, and to receive and to ship to foreign markets their immense and varied productions, no position can be selected equal to that of Mobile.

Let us now examine the character of the country through which the railroad will pass in order to form an idea of the *local trade* which will be transacted upon it.

As we proceed north from Mobile the country for about eighty or one hundred miles is of a sandy nature, intermixed with clay, and covered with the long leafed yellow-pine, a considerable quantity of which is now exported to France for naval purposes. This section of country better adapted for grazing than for any other agricultural purpose, is at present principally inhabited by small farmers who follow this occupation. It only requires an opening to a market to render it valuable for supplying lumber, fire wood, bricks, tar, pitch and turpentine.

Once out of this pine region, the railroad will enter and will pass through for its whole course up to the mouth of the Ohio, without ex-

ception, the most fertile cotton, corn and grain region in the United States. A section of country, the greater part of which is cut off from water communication for three-fourths of the year, and which is in want only of a direct and regular communication with a market to make it the garden spot of America.

When completed the Mobile and Ohio railroad will command the trade of eight counties in Alabama, twenty counties in Mississippi, thirteen counties in Tennessee, and four counties in Kentucky. These counties had in 1840 a population of 410,927, distributed as follows:

In the counties in Alabama,	148,383
In the counties in Mississippi,	101,553
In the counties in Tennessee,	128,430
In the counties in Kentucky,	32,561
Total,	410,927

Assuming that the population doubles every twenty years equal to an increase of 30 per cent. for six years, and there is every reason to believe that the ratio of increase has been greater, the present population would be 534,205.

The following table exhibits the quantity of live stock, the annual agricultural productions and the value of home made goods of the different portions of the States above mentioned, obtained from the census of the year 1840:

	No. of horses & mules.	No. of neat cattle.	No. of sheep.	No. of swine.	Value of poultry	Bushels of Wheat.	Bushels of Oats.
Alabama,	27,646	111,703	26,441	185,124	119,375	96,643	132,913
Mississippi,	32,087	197,198	29,473	287,516	95,590	114,308	171,683
Tennessee,	54,211	171,726	107,967	523,248	110,946	1,184,959	901,643
Kentucky,	15,447	33,478	39,359	120,837	24,249	208,169	381,023
	129,391	514,105	203,240	1,116,725	350,160	1,604,079	1,587,262

	Pounds of cotton.	Bushels of corn.	Bushels of rye.	Pounds of wool.	Bushels potatoes.	Pounds of tobacco.	Home made fm'ly goods.
Alabama,	24,466,254	2,781,457	9,113	35,023	213,311	14,894	$248,386
Mississippi,	22,605,110	3,624,263	2,081	39,083	262,539	40,385	211,582
Tennessee,	7,343,561	5,065,443	28,912	157,865	265,828	11,790,877	466,177
Kentucky,	274,427	1,385,016	9,446	54,734	45,894	2,020,552	136,873
	54,689,352	12,856,179	49,552	286,705	787,572	13,866,708	$1,063,018

Agricultural products increase in much greater ratio than the population. If to the above amounts an increase of 40 per cent for the last six years was added, it is thought that the true quantities for the present day would not be over estimated.

Such is the character of the country, the population and the annual products which are to supply this great enterprise with its *local trade.* Will this local trade be sufficient to support the road? Experience best

answers this question. The Erie canal, in 1824, running through a population of 394,631, gave $600,000 toll. This road will pass through a population of over 500,000, and will derive a revenue from passengers as well as freight.

Nor will this railroad be dependant upon the local trade commanded by the main line alone. A great line of railroad like the Mobile and Ohio Railroad, extending in a continuous line without crossing navigable rivers and avoiding thereby the necessity of *shifting freight*, from the most inland point on the waters of the Gulf of Mexico to the junction of the Mississippi and Ohio rivers, will have its lateral branches.

Let us examine for a moment where these lateral branches would intersect the main line, and also the character of the country, the resources of which these branches would develope.

At the distance of about 120 miles north of Mobile, the main line will meet with the extension of the Vicksburg, Jackson, and Brandon railroad; charters have been obtained to extend this road through Mississippi and Alabama to Montgomery. It would not be difficult to prove that most of the trade of this railroad west, and for many miles east of the main line, will seek Mobile as being the nearest sea-port town and as offering the greatest shipping facilities. Thence forty-two miles northwardly at a distance of one hundred and sixty-two miles from Mobile, the route will be on a line nearly due west from the Lipsey river at its junction with the Little Tombigby. By running a lateral branch up the valley of the Lipsey, a distance of from forty to fifty miles, a connection can be formed with Tuscaloosa. The advantages of Tuscaloosa and its vicinity in a manufacturing point of view, are already beginning to attract the attention of manufacturers and capitalists. The inexhaustible beds of bituminous coal and of rich iron ore in close proximity to one another, and the water power afforded by the rivers and streams in the neighborhood of Tuscaloosa, with a safe and uninterrupted communication with a market, will enable her to foster and encourage the different industrial pursuits dependent on these invaluable materials, and to become in a few years, as her position justly entitles her to, the Birmingham of the South. Her inland position and her want of communication for the greater part of the year, will hinder, if not entirely prevent the introduction of manufactures on a large scale. Where would Tuscaloosa seek for an outlet to her productions, evidently at the nearest sea-port, Mobile. Tuscaloosa has a great interest in encouraging this enterprise in many other respects. Besides affording a market for her manufactured articles and for her coal, which must in time become of great value, Tuscaloosa being the nearest point to the Gulf and South Atlantic coasts where supplies of

coal for steamers can be obtained, this railroad will likewise present to her a cheap, direct, and expeditious communication with the producing regions of Tennessee and Mississippi. The supplies for her manufacturing population will thus become cheap and abundant, and will enable her with her acknowledged health and her advantges to compete successfully with other manufacturing places.

When the main line is extended to the distance of about 276 miles from Mobile, it will be nearly due west from the western terminus of the Tuscumbia and Decatur railroad. By extending this railroad westwardly only about thirty-five miles, a connection can be formed with the Tennessee valley and north Alabama,—a section of country completely cut off from all intercourse, except by the tedious and dangerous navigation around by the Tennessee and Ohio rivers, and a region productive in cotton, corn, grain, and stock, and abounding in iron, coal, and marble. Thus, too, will be accomplished the long desired connection of the waters of the Tennessee with those of the Alabama and the Gulf of Mexico, in the cheapest, most expeditious, and practicable way which can be selected.

At the distance of about 295 miles from Mobile, a connection with the Memphis and Lagrange railroad can be formed by running a lateral branch of perhaps not more than 30 miles. This connection, independent of commercial advantages, would be of great benefit in a military point of view, Memphis being the site selected by Congress for the establishment of a navy yard for the construction and equipment of steam vessels.

The main line can be made to form a juncture with the Tennessee river at or near Savannah, or at Perryville, which is in the vicinity of extensive beds of iron ore. At either place it would intercept the train of the vallies on both sides of the Tennessee river, which now has to perform a tedious voyage around by the Tennessee, Ohio, and Mississippi rivers, of from four to five hundred miles before it arrives at the same parallel of latitude as the point of departure. From either Perryville or Savannah, at the great elbow formed by the Tennessee river, a branch might be made to Nashville, avoiding altogether the Cumberland Mountains, which present many obstacles of a serious kind to any other approach to Nashville from the sea-ports on the south Atlantic coasts. This branch to Nashville will form a link to the great chain of railroads now being projected to connect the Eastern and Middle with the Southern states by running a line of railroads to the south and east of the Ohio river, and of which the Baltimore and Ohio railroad is the commencement. By the proposed route, Nashville can have a

much more direct and expeditious communication with a better sea-port for her purposes, and by far over a more favorable route than by the route she is now seeking to establish, via Chatanooga. That this branch to Nashville, considered as a part of a line which must be formed at no distant day to connect the Northern, Eastern, Middle, and Southern States together, is of great importance there can be no question, when it is considered that it will run through some of the richest agricultural portions of the Union.

Through the western district of Tennessee are inexhaustible beds of marl, cropping out at the surface. This valuable material for agricultural purposes will form a great article of transport.

There is no route for a railroad in the Union to compare with this. Here is a main continuous line of 440 miles in length, running without crossing navigable rivers or mountains, through the richest portions of three of the most productive States, where they are in a great measure deprived of all kinds of communication, terminating at one end at a desirable sea-port, and at the other where it can command the trade and travel of eight States and the western territories, with lateral branches extending by short distances into the richest and most varied agricultural and mineral regions, which, although passing through different State governments, will be governed throughout by the same laws, subject to the same institutions, and will be under the same management and responsibility.

Annexed are two tables of approximate distances, the one from the city of St. Louis to the different southern ports, and the other from the mouth of the Ohio to the same points. These tables show conclusively the great advantages possessed by Mobile in being the nearest sea-port to the central points of the western country:

		Miles.
Approximate distance from St. Louis to	Mobile,	590
" " "	New Orleans, by the river,	1286
" " "	Mouth of the Mississippi,	1390
" " "	Savannah,	750
" " "	Charleston,	775
Approximate distance from Mouth of the Ohio to	Mobile,	440
" " " " " "	N. Orleans, by the river,	1112
" " " " " "	Mouth of the Mississippi,	1216
" " " " " "	Savannah,	600
" " " " " "	Charleston,	625

At this late day it will not be denied that railroads, from their uniformity of action, speed and certainty, and from the uninterrupted communication which they preserve, not being "arrested by drought, nor suspended by frost," have the decided preference in the conveyance of passengers and light goods, over all other methods. At a speed of

twenty miles per hour, the trip for passengers can be performed from the mouth of the Ohio to Mobile, in twenty-two hours. The trip between Mobile and New Orleans is now made in fourteen to sixteen hours. With the railroad, therefore, the transit could be made between New Orleans and the mouth of the Ohio in from thirty-six to thirty-eight hours. By the river route it is now performed in about seventy-two hours down, and ninety-six hours up, or on an average of eighty-four hours, being a difference in saving of time in favor of the railroad of from forty-six to forty-eight hours in the transit to New Orleans, and from seventy-six to seventy-eight hours to Mobile. There can be no question then, that the greatest part of the travel arriving at the junction of the Mississippi and Ohio rivers, destined for the South, will take the direction of the railroad, and the same remark may be applied to the travel and light goods going North. We assert further, and we think it might be proved that the railroad will obtain the transportation of a large portion of the heavy goods which have to await the rising of waters, and the breaking up of ice, and that it will hold a close competition with the Mississippi steamboats in the transportation of freight of all descriptions. To support this assertion, reference is made to the immense amount of capital invested in steamboats on the Mississippi, the dangers of its navigation, and the consequent high rates of insurance, the great expenses attendant on running steamboats, the injury done to particular kinds of freight, and the losses thus occasioned in their value, and finally to the fact, that freight has to be transported on the river one thousand one hundred and twelve miles from the mouth of the Ohio to New Orleans, in contra-distinction to about four hundred and forty miles, the distance by railroad from the same point to the city of Mobile.

Nor is this assertion based upon the above facts alone. Although it may be said that we are in the infancy of railroads, yet attempts have been made by railroads successfully to compete with river and canal navigation.

Until within the last few years, the produce which passed to and from the upper part of Georgia, was transported on the Savannah river. It is now nearly all carried on the South Carolina railroads. The Central and Monroe railroads terminating at Savannah, have taken away the freight from the Ocmulgee and Altamaha rivers. The successful competition of the Philadelphia and Reading railroad with the Schuylkill canal, is familiar to all. More recently a charter has been granted, and the stock subscribed for a railroad to run *along the banks of the Hudson* river, which affords the safest and best river navigation

in the world. The navigation on the Mississippi on the contrary, is attendant with the greatest dangers and expenses; this railroad, instead of running along its banks, cuts off nearly six hundred and seventy-two miles in a distance of one thousand one hundred and twelve miles, and terminates at a sea-port. The railroad will not have to contend against an annual loss of nearly $3,000,000 due to the dangers of river navigation, or against an insurance of one and a quarter per cent. on the value of the cargoes, and from twelve to eighteen per cent on the value of the hulls.

In Hunt's Merchants' Magazine, for August, 1846, it is stated "that the Reading railroad, ninety-two miles in length, transported in 1845, eight hundred thousand tons of coal, and in the single month of July, 1845, one hundred and four thousand tons. The business for the year 1846, is estimated at one million two hundred and twenty thousand tons, which is equivalent to seven million five hundred thousand bales of cotton; more than three times the entire crop of the United States. This business was performed at the rate of one cent per ton per mile, or one dollar for one hundred miles, one-half of which was shown to be profit." This road is, however, level, or has a descending grade towards the point of delivery of the freight. It is well known that the Mobile and Ohio road, with the exception of a small portion, can be located with the same advantage as the Reading railroad; but admitting that the amount of ascending grade to be overcome is one thousand feet, the additional expense incurred in passing over this elevation could be nearly ascertained by adding fifty miles to the measured air line of the road, and calculating the motive power for this length, and by applying the other expenses to the real length of the road.

To be on the safe side, however, we suppose that all the expenses of the railroad have augmented by the addition of fifty miles to the actual length of four hundred and forty miles, this would give for the expense of transporting freight from the mouth of the Ohio to Mobile, two dollars and forty-five cents per ton.

The actual expenses per mile run by the trains on the Georgia railroads including maintenance of way, engines, cars, repairs, &c., were for 1846 .60 .3 cts. The average expense per mile run of the principal railroads at the north for the last four years was 82 cts. According to E. H. Derby, Esq., the expenses on the Massachusetts railroads were 65 cts. per mile run, and with large traffic 40 cts. per mile run.

A locomotive which will haul from *one thousand to twelve hundred tons* on a level road at a speed of ten miles an hour is no "*uncommon*

machine." On the Philadelphia and Reading railroad they carry on five hundred tons, each trip, distributed in one hundred cars.

With regard to passengers "estimating the weight of one hundred passengers and the required cars for transporting them equal to twenty-seven tons, the weight of two hundred and fifty passengers would be sixty-seven tons; this weight can be drawn with ease at the rate of from thirty to thirty-five miles per hour by an engine of twelve tons, and an engine of fifteen tons can draw three hundred passengers at the same speed."

From the above data the following tables are constructed. It will be perceived that the number of tons per train vary from five hundred down to one hundred, and the number of passengers vary from two hundred down to seventy-five per train, while the cost per mile run and the distance are constant quantities:

A.– TABLE I.

Showing the cost of transporting freight at seventy-five cents per mile run:

No. of tons per train.	Expense per mile run.	Distance miles.	Cost of transporting 1 ton of fr'ht fm. mouth of the Ohio to Mobile.	Distance.	Cost of transporting 1 ton freight ¾ the distance between mouth of Ohio and Mobile.
500	$0. 75	440	$0. 66	330	$0. 495
400	"	"	0. 825	"	0. 618
300	"	"	1. 10	"	0. 825
200	"	"	1. 65	"	1. 2375
100	"	"	3. 30	"	2. 475

A.—TABLE II.

Showing the cost of transporting freight at one dollar per mile run:

No. of tons per train.	Expense per mile run.	Distance miles.	Cost of transporting 1 ton of fr'ght fm mouth of the Ohio to Mobile.	Distance.	Cost of transporting 1 ton freight ¾ the distance between mouth Ohio and Mobile.
500	$1. 00	440	$0. 88	330	$0. 66
400	"	"	1. 10	"	0. 825
300	"	"	1. 4666	"	1. 10
200	"	"	2. 20	"	1. 65
100	"	"	4. 40	"	3. 30

B.—TABLE I.

Showing the cost of transporting passengers at $0. 82 per mile run:

No. of passengers per train.	Expense per mile run.	Distance miles.	Cost of transporting 1 passenger from mouth of Ohio to Mobile.	Distance. miles.	Cost transporting one passenger half the distance thro'.
200	$0. 82	440	$1. 804	220	$0. 902
150	"	"	2. 405	"	1. 202
75	"	"	4. 810	"	2. 405

AGRICULTURE OF THE SOUTH AND WEST.

1.—Destruction of the Cotton Catterpillar.

We were favored with the subjoined letter, some time ago, from a gentleman formerly resident in Florida, and made an extract from it. We notice since that others have advanced similar views, and the subject is certainly deserving of attention:

"The caterpillar is the origin of the army worm, and as ploughing cotton fields is not performed until near the time of planting, they remain undisturbed until they have so far gained maturity, that they are not destroyed by the plough, and at that season they are not apt to be injured by frosts; soon after they begin to feed on tender vegetation, lay millions of eggs, which mature so as to need food, and thus they increase until they deserve the name of army worm. Their effect is only too well known.

"Rainy, cloudy weather, produces them fastest; hot dry weather is not so favorable, but if the heat is too great, they can soon get beyond the heat in the earth, even if they should feed at night. They will find places to spend the winter, not only in the ground, but under wood, in the crevices of the rough bark of stumps or trees. If no remedy is found to exterminate them, they will increase until the cotton country will share the fate of Egypt.

"Now for the remedy. So soon as a field, or part of a field, is relieved of its crop, cut down all the stocks, set fire to them some clear, dry day; and cause the fire to run over the field. If the stocks do not furnish a sufficiency of material to produce a good fire, pine or oak leaves should be added. The stumps and standing trees will take fire, and the deposit of the eggs will be reached by the devouriug flames, and the origin of the caterpillar and fly will thus be destroyed. Adjoining woods, and if possible, fences should be removed, and be subjected to the cleansing effect of the fire. This is an easy and will be an effectual process, which will again cause cotton fields to repay the planter by a good product.

"I say to the industrious cotton planter, run fire over your cotton fields, and you will secure your usual product. So soon as the cotton is so far advanced as not to be subject to injury, if hogs are turned into the field they will hunt the catterpillars, eat and get fat on them; will, in fact, take them in preference to corn. The planter will thus turn this destructive insect to profit by fattening hogs."

2.—The Pork Trade.

The followjng will show the number of hogs slaughtered during the past two years, and the different points of the Trade:

	1846.	1847.
Wheeling	18,000	6,000
Ripley	21,000	9,000
Scioto Valley	93,000	65,000
Lawrenceburg	20,000	8,000
Maysville	11,000	6,000
Madison	66,000	45,000
Warsaw	8,100	4,800
Westport	18,000	13,300
Louisville	102,600	63,000
Clark County, Ia.	11,000	2,500
New Albany	6,000	5,000
Cincinnati	305,000	225,000
Total	678,100	452,6000

of every article demanded by the necessities and luxuries of man, and can be had at prices very little, if any thing higher than similar articles can be procured at Frankfort. The public wharfs or quays are numerous, well built, and convenient. The more independent of the citizens live in great comfort, and some of them have the most delightful residences in the vicinity which you can conceive. The gardens are surpassingly beautiful every where. Every variety of tropical shrub, flower and tree grow with vigor and rapidity, and are now as green as a bay tree at the north in midwinter, or any tree with us in June. The oleander and other flowering shrubs of that character grow from the height of from ten to twelve feet in a few years and are now loaded with fresh and beautiful bloom. During the coldest days this fall the thermometer stood at about 62 degrees Farenheit, though it has ranged for a week at about 74

"Galveston Bay is the largest inlet on the coast. It is about thirty miles in length, and varies from twelve to eighteen in width. The Island of Galveston or San Luis, on which the city is located, stretches along the coast in front of the Bay about thirty miles with an average breadth of about three and a half miles. Its average rise above the level of the water is only four or five feet, and the surface is perfectly level nearly from length to breadth, if we except an occasional bank caused by successive deposites of sand by wind and overflow from northern wind tides. With such an even surface of land it will be perceived the streets are very nearly level and the entire city and suburbs are as if they were built on a slightly graduated plane."

7.—The City of Pensacola.

From the Report of a Committee of citizens: "Pensacola is now the humble dependency of Mobile and New Orleans, but give her this element of strength, and she will at once stretch her invigorated arms across the highway of nations, and hold converse as an equal with the richest emporiums of the old world.

"She is now struggling in the conflict with all those privations which follow in the train of municipal as well as of individual poverty; but let this railroad be completed, and the blessings of education, of refinement, of religious and benevolent institutions, would be added to the comforts of wealth, and make her people wiser and better, as well as richer.

"No city in America, perhaps none in the world, has a harbor combining more advantages for commercial purposes than we have—a depth of water abundantly sufficent for the largest merchantman, with an anchorage perfectly secure against the wildest storm, we lack absolutely nothing in regard to these exterior advantages. Our location is healthy, and the climate delicious; and if we are but put into communication with a fertile back country, we shall then want none of those requisites which are necessary to the making of a great city."

8.—The City of Cleveland, Ohio.

This growing port which represents so large a portion of the commerce of Ohio, on the Lakes, continues still its giants strides as will appear by the statistics below:

Foreign Exports in 1846,	$462,934
Imports for Canada, in 1846,	10,189
Exports Coastwise,	7,040,402
Imports Coastwise,	5,045,495

Cleveland is finely situated for commerce.* Lakes Erie, Michigan and Huron give it a ready access to a wide extent of country. The Erie canal connects it easily with New York and the intermediate places on the canal and Hudson river; the Ohio canal passing through the entire central part of Ohio, connects it with the Ohio river; the Pennsylvania and Ohio canal which joins the Ohio canal at Akron, connects it with Pittsburg, and opens a southern passage to the Atlantic cities, and the Welland canal gives it access to the Canada market. No place on Ohio probably equals Cleveland in natural advantages. It will always be the emporium of northern Ohio, and the existing facilities gives it access to a greater extent of country for trade than perhaps any other city of the west. These advantges have not been unimproved. In 1832 there was 26 sail vessels and one steamer belonging to the port of Cleveland; in 1842 there were 75 sail vessels and 5 steamers. The exports to Canada in 1832

* Geographical Dictionary—Cleveland, 1845.

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THE COMMERCIAL REVIEW OF THE SOUTH AND WEST.

A MONTHLY JOURNAL OF TRADE, COMMERCE, COMMERCIAL POLITY, AGRICULTURE, MANUFACTURES, INTERNAL IMPROVEMENTS, AND GENERAL LITERATURE.

"Commerce is King."—CARLYLE.

J. D. B. DE BOW,
EDITOR AND PROPRIETOR.

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was little or nothing; in 1842 they amounted to $1,016,926. The tonnage of the port in 1842, was 8071 exclusive of steamboats. The vessels that arrived in 1842, was 1418, of steamboats 1050, total 2468. The number of vessels departed was 1412, of steamboats 1050, total 2462. Vessels entered from Canada 356; do cleared for do, 363. Of the imports in 1843 in vessels other than steamers, there were 49,740 pakages and 700 tons of merchandise, 89,067 barrels of salt, 6373 do of fish, 2,229,390 feet of lumber, 4281 thousand shingles, 677 cords of shingle bolts, 1440 burr blocks, 1741 barrels and 645 tons of gypsum, 234 cords of limestone, 5270 bushels of corn, 295 boxes of clocks, 1786 barrels of flour, 4000 hoop poles, 1715 hides, 1609 cedar posts, 408 barrels of water-lime, 145 tons of pig-iron, 25 coaches and 122 tons of marble.

AMERICAN STATES.

The Parishes of Louisiana.

Madison.—State tax in 1845, $7,649 25; in 1846, $9,019 98. The amount of immigration into the parish, says the Richmond Journal, has been very great of late years. Steadily the timber goes down, and prosperously the cotton and grain stalks rise up in its place. Population in 1846, 1,500 whites.

	Catahoula.	*Ouachita.*
Number of acres of taxable land, first class,	25,446	25,311
" " " " second class,	46,578	30,282
" " " " third class,	26,886	57,085
Total number of acres subject to taxation,	98,910	112,678
Number of town lots,	1304	150
Valuation of land, town lots, etc.,	$1,063,995	$421,490
Number of Slaves,	2586	2171
Total amount of State taxes for the year 1846,	$4,243 79	$3,413
Number of children between six and ten years,	412	396
Number of children between ten and sixteen years,	355	
Number of barrels of corn,	146,926	80,218
Number of bales of cotton,	5.382	5,942
Number of acres in cultivation in cotton,	8,102	7,498
Number of acres in cultivation in corn,	6719	5,690
Valuation of real and personal property,	$2,000,000	$824,487

The whole valuation of landed property in Louisiana, in 1845, was $98,609,363 95, and the number of slaves, 181,028. Of these Orleans parish possessed $45,503,185; Jefferson, $4,412,775; St. Mary's, $3,632,708; Lafourche Interior, $2,960,000; Rapides, $2,785,790.

2.—Navigation and Wealth in Texas.

The Trinity, the largest river in Texas, takes its rise within ten or twelve miles of Red River, at a point two or three hundred miles to the west of Fulton, which is nearly at the bend of River river, from which place the course of this latter stream is nearly east and west to its head waters near the Rocky mountains. It will, therefore, be seen that the Trinity, running S. S. E. from eight hundred to one thousand miles from our northern boundary to Galveston Bay, quite intersects our whole territory, leaving to the east about half the counties of Texas, and probably more than half the present wealth and population of the whole country. The concurrent testimony of all who have had the best means of knowing, shows that the Trinity has been navigable for light draft steamers at least six months in the year for the last ten or twelve years, as far up as the eastern, or Bois d'Arc Fork, a distance of five or six hundred miles from its mouth by the course on the river. Just below the mouth of this fork, at Mitchell's Bluffs, the roads from Arkansas to Austin and San Antonio cross, at which ferry there are now daily passing about twenty wagons of emigrants and others. This statement is made by a gentleman in this city direct from that country. He represents that whole region, extending from Mitchell's Bluffs, to the

cross timbers, as one of the most fertile and best timbered districts in Texas, and as now filling up by planters with unexampled rapidity. This region embraces Mercer's and Peters colonies, the former having now at least two thousand, and the latter three thousand families. From Fannin and other counties adjoining, five thousand bales of cotton have been wagoned this season to Shreveport, a distance of from one hundred and fifty to two hundred and fifty miles. From Shreveport the distance by water to New Orleans is 1500 miles, a great portion of which is difficult and dangerous navigation. The same cotton might reach the navigable waters of the Trinity with from fifty to one hundred and fifty miles of wagoning, and might thence be brought to Galveston with less than half the above distance of boating. These facts, which we believe are substantially correct, are certainly worthy of some consideration by the citizens of Galveston. Is not this city the natural outlet for the produce of the country of which we have spoken? And if it is, is it not important that these valuable privileges should be duly estimated and secured with the least possible delay? —*Galveston News.*

3.—Emigrants to the United States, 1846.

Maine	5,930	Virginia	82
New Hampshire	25	North Carolina	3
Massachusetts	15,079	South Carolina	408
Rhode Island	83	Louisiana	22,148
New York	98,863	Florida	90
Pennsylvania	7,235	Texas	354
Delaware	6		
Maryland	9,337	Total	158,648

4.—Indian Mounds in Louisiana.*

On the left bank of the bayou about a mile from Grand Lake, there stands one of those colossal mounds of shells, which are also found in many parts of the region bordering on the Gulf coast, and other places, which stand out to the eye of the spectator as curious and indelible *vestigia* of the past. It has been often asked, are these gigantic embankments natural or artificial? who built them, and for what purposes were they constructed? On first examining them, the beholder is impressed irresistably with the belief that, whatever may have been their origin, they must be of great antiquity. On the mound of bayou Pigeon there are live oak trees evidently the growth of centuries. The alluvial depositions on and around it conceal its size and shape, and destroy or neutralize the idea of vastness. It is impossible even to guess at the original dimensions; but we have marked traces of its existence at the distance of a hundred yards from what is now the body of the mound. Its foundations are laid broad and deep in the earth far beneath low water mark; is it, then, abusurd to suppose that this herculean mausoleum was once a lonely mountain islet in the great inland sea, which washed the high prairie lands of western Louisiana, and of which Grand Lake is a fragmentary vestige. The shells have become entirely cretaceous, and when removed carefully from their resting places the valves are found *in situ*. In an opening on the summit we picked up several human teeth, the enamel of which was, apparently, in an excellent state of preservation, and a young friend who accompanied us exhumed a fragment of the *os humeri* of a young person, much stained, and so friable that it crumbled to dust between the fingers. We regard this embankment as a mere fragment of the original structure; the tooth of time has deeply indented the perishable materials of which it is composed; the elements of destruction and decay have swept over it and mutilated its fair proportions, but it is still a grand and imposing monument of an age gone by, and of a people who have left us no other trace of their existence. The shelly mounds and embankments of the south, are similar in many respects to the earthen *tumuli* of the west; erected probably by the same people and for the same purposes. The Indians have universally denied, when asked, knowing anything at all of the history of these mounds. No tradition whatever—not the vestige of one—exists, so far as we ever read or heard, among the present Indian races, respecting the time when, or the people by whom

* Planters' Banner—Attakapas.

these mounds were built. In the immediate vicinity of many of the mounds, and apparently connected with them, are to be seen the remains of ditches and forts, making it highly probable, if not absolutely certain, that the same people who built the one, dug the other. The fortifications are planned with the skill of a scientific engineer, and apparently by men having some knowledge of geometry; but the Indians know nothing of fortifications as a science.

5.—The Basin of the Mississippi.

For the following, we are indebted to Wm. Darby, Esq., in a communication addressed to the Hon. J. C. Calhoun:

The outlines of the Mississippi Basin can only be determined approximately; but, however with adequate accuracy for all general purposes. Commencing on the Gulf of Mexico, and at the mouth of the Atchafalaya, the subjoined tabular view, taken from the best maps, will serve to show the several parts, and perimeter of this great Basin.

	Miles.
Mouth of Atchafalaya, between the sources of streams confluents of the Mississippi Basin, and those of the Gulf of Mexico, to latitude forty degrees in the Rocky Mountains, from whence issue the sources of Platte, Rio Grande, and Colorado rivers,	1,400
Along Rocky Mountains to sources of Marias river,	700
Around northern sources of Missouri river, to the head of Red river branch of Assinniboin,	800
Around the sources of Mississippi proper, to the head of Kankakée branch of Illinois river,	1,100
Between the confluents of the Canadian sea and those of Ohio, to the extreme source of Allegheny river,	500
Along the dividing line of water source between the sources of streams flowing towards the Atlantic ocean and those into Ohio river,	700
Between confluents of Mobile and Tennessee rivers,	300
Between sources discharged into Mississippi and those of Mobile and Pearl rivers, to the mouth of Mississippi river,	400
Outlet of Atchafalay,	200
Entire outline of Mississippi Basin,	6,100

To estimate, to any very near approach to accuracy, the actual area comprised within this great perimeter exceeding six thousand miles, is no easy task; but the following carefully measured sections, geographically and by the river valleys, will exhibit the parts comparatively with each other:

Table of the extent of the Mississippi Basin by lines of latitude.

	Square Miles.
From lat. 45 deg. to 49 deg. N.,	150,000
" 40 deg. to 45 deg. N.,	410,000
" 35 deg. to 40 deg. N.,	520,000
South of latitude 35,	170,000
Entire surface, by Rhumbs, of latitude,	1,250,000

The sollowing, from a careful measurement of its great valleys, is the aggregate area of the Mississippi Basin, as given in the third edition of Darby's Geographical Dictionary:

	Square Miles.
Valley of Ohio,	200,000
Valley of Mississippi proper,	180,000
Valley of Missouri,	500,000
Valley of the Lower Mississippi,	330,000
Aggregate area,	1,210,000

GENERAL LITERATURE.

1.—Historical Associations—Louisiana Society.

Our own experience, live as long as we may, is very little, and if we were confined to it in our actions, the highest and the lowest order of animals would approximate very nearly. No man studies for himself—let him be selfish enough to think so—the truth that he discovers belongs to all the men that live with him, that come after him; it is the basis for other truths to be built upon, or from which they are deduced; and thus the world marches on, each generation wiser than its predecessor, but laughed at by the next.

What is History? It is a record of the past. The record may be perfect or imperfect; it cannot be true or false. If imperfect it may be a record, so far as it goes; if false, it is no record at all. Some have talked about the philosophy of history—Bolingbroke at the head—but this is a different thing from history. If we know all the events that have taken place before us, in their order of antecedence and sequence, we know history—if we rise higher and regard causation, deduce results and infer general or universal principles, we attain the philosophy of history.

Attending to this distinction it will be seen that one may be a collector of facts—a historiographer,—a historian, and do essential service to mankind, though he stop here and deduce not a single principle from his facts. Modern ideas of the division of labor demand this. One may do thus much and be incapable of more. In fact, few who are capable of generalizing and philosophising about history, would succeed at all in managing in its details—patiently, minutely, laboriously collecting and recording them. The architect can do nothing without the "hewers of wood and the drawers of water," and the last are as necessary as the first.

Historical societies occupy this subordinate but still important place; by their correspondence, by their committess, by the spirit which they infuse and the interrogations they put to all classes of society; they rescue from oblivion the precious results of the past in all the departments of life. They collect them, they combine them, they preserve them, and hand them down a legacy to succeeding generations, consistant records in the stead of vague traditions.

We duly appreciate these associations, and have labored and will labor not a little again to increase their number in every section of the Republic, appealing gratefully to our libraries for their results.

The following catalogue of those societies in the different States, is correct so far as we have been enabled to gather information. The total number of volumes published we have not learned.

Historical Society of Massachusetts, Boston; Rev. Chas. Sewell, Corresponding Secretary; 8 vols. published records. Historical Society of Rhode Island, Providence; 5 vols. Historical Society of Connecticut, Hartford; 6 vols. Historical Society of New York, city of New York; 7 vols. Historical Society of New Jersey, Newark. Historical Society of Pennsylvania, Phildelphia; 5 vols. Historical Society of Maryland, Baltimore. Historical Society of Virginia, Richmond; See Literary Messenger for March. Historical Society of Georgia, Savannah; 2 vols. Historical Society of Tennessee, Knoxville. Historical Society of Ohio, Columbus. Historical Society of Cincinnati. Historical Society of Vincennes. Historical Society of Indiana, Indianapolis. Historical Society of Missouri, Jefferson City. Historical Society of Illinois, Allton. National Institute, Washington, D. C. American Antiquarian Society, Worcestor, Mass.

The Historical Society of Kentucky and that of Louisiana may be considered as twin sisters, The former has a library of three thousand volumes, forty active and one hundred honorary members, and the following officers: Henry Pirtle, L. L. D., President; Hon. W. F. Bullock, Vice President; T. F. Shaffner, Secretary and Librarian, Louisville; L. S. Goodwin, Treasurer.

In our previous numbers we furnished the particulars of the Louisiana Society, its organization, constitution, querries, officers, etc., etc., to which we have but little space at this time to add.

The Society have had delivered before them this winter, one able address from the Hon. B. F. Porter, of Alabama, and is in expectation of several others from other leading citizens, Many communications have been sent to the Secretary of an interesting nature from different parts of the states of the Union; some donations of vol-

umes which may be referred to at the office of this Review. We most cordially invite such favors.

The Kentucky Legislature has passed lately the following act: "The Secretary of State shall forward to each State Historical Society in the United States, a copy of the acts, journals and public documents published by authority of this General Assembly." Notice of an intended shipment of these books to us, has been given, which should be met on the part of our Legislature by a reciprocal act.

We conclude this rambling paper with a few extracts from letters directed to the Secretary of the Louisiana Historical Society, which cannot but have great interest:

From Professor Stevens of the University of Georgia, and author of a History of that State, now in press, we believe:

"I am rejoiced to learn that you have established an Historical Society in Louisiana, because by making proper efforts, *now*, much, if not all, that relates to Ante Colonial, Territorial and State history can be secured. The early annals of your State are deeply interesting, beginning as they do from the time of De Soto,—running onward with the romantic and daring adventures of La Salle. I hope you will at once, therefore, set about obtaining copies of all your public documents both at Seville and in Paris.

"Our State, you are aware, sent an agent to England to obtain Colonial documents, but he only partially succeeded, and the Historical Society is endeavoring by its own funds to supply the deficiency. I am daily expecting six more volumes of transcripts to add to the twenty-three already in my possession, and by which I am endeavoring to prepare (as Histriographer of the State) a new History of Georgia. Having so long felt the need of original and authentic records as the basis of my history, without which, I would not stir one step, I feel the more earnestness in urging upon your Society as one of its earliest, and indeed its principal labors, to procure what may yet be found in Europe relating to the planting and colonization of Louisiana.

"Another matter of importance is the collecting of private papers of distinguished men. These are often very valuable in illustrating the internal history of the people among whom they live. In the casual expression of even business letters, I have sometimes found most important information. Let nothing of this sort be lost, but gather up every fragment of the past; it will be needed in the future; for as modern Rome is built up of the once crumbling ruins of the ancient mistress of the world, so modern history is but the re-constructing of the new memorials of glory, from the fragments of a decaying past.

"Another matter of importance is to obtain biographical sketches of your former and present distinguished men. What an important part, for example, has your venerable President acted in the Judiciary of your State! His reminiscences must be valuable and should be preserved. As division of labor is generally productive of greater results, I would humbly suggest having standing committees on the leading departments of History, viz: Military, civil, judicial, religious; or its French history to it being abandoned to Spain in 1764; its Spanish history until its retrocession to France through Gen. Victor in 1803, and the history of its purchase that year by the United States down to its erection into an independent State in 1812. Either of these plans will embrace its entire history, and neither could be pursued with diligence without signal success."

From Dr. William Gilmore Simms, Historian of South Carolina, Biographer of "Marion," "Smith," etc., etc., etc.:

"To J. D. B. De Bow, Esq.,

Secretary of the Louisiana Historical Society:

"I have but a few days returned from the north and find your kind letter, covering the compliments conveyed me by your Historical Society, awaiting my arrival I seize the first leisure moment to express my acknowledgments, and to congratulate your citizens upon the becoming and honorable beginning they have made in doing justice to your sectional history,—than which I know none of greater, and few of equal interest among the whole of our States. Your Indian History, particularly that of the Natchez and the Chickasah, should demand your attention. You should specially devote your labors to the search after all traditions relating to the supposed transit of the red-men, from the ultima thule of the South-West—beyond which, according to their accounts, all was dark and sunless, and cold with icy barriers. It lies also within your province to institute the closest inquiries into the ancient histories of Mexico, Yucatan and Central America. Your progeny are destined

to hold these empires, and you may well begin to look into their inheritance. Reject no facts in such a search however fragmentary. Did you ever see the narrative given by Lionel Wafer in regard to the Indians of Darien—or rather the white people of that region who wore cotton clothing. It is worth your examination. Let me also commend to your close perusal the Sagas of the Northmen as published by Professor Rafu. I have the notion that these Sagas particularly concern us in the South. But I will not distress you with details for which, just at the moment, I have neither the *material* nor the leisure—nor do you need them."

Agesilaus, the Spartan King and Captain.

In the November number, when discussing the subject of "Coins," we alluded to a circumstance which we saw stated somewhere, that Agesilaus had received three hundred pieces of money from the Persian King as a bribe. That we may not do injustice to the memory of a great man and to the truth of history, though our classical accuracy may suffer, we give the reader a criticism upon the expression, emanating from a learned and decidedly military mind in this State. The writer will pardon us for the liberty taken in publishing it. To correct an error is ever our duty and privilege. Let the Greek Captain have all his dear bought reputation. We envy him none of it.—Editor.

To J. B. De Bow, Esq.,—

Your article on "Coinage" I have read with great attention. One part of a sentence on page 291 I do not approve, "with thirty thousand of these he (Darius) bribed Agesilaus, King of Spartan." Agesilaus being an old friend of mine, and having from a boy always admired his character, his military genius, and his contempt of money, I was struck with the strangeness of the expression. Can it be possible that my old friend, the greatest man of his age, the consummate Captain, the terror and scourge of the Persians, the iron ruler of an iron people, whose currency was iron, should be bribed by pieces of gold! And that I should have read history so carelessly when young as to admire such a man! I referred at once to Plutarch, and read, "At the same time he desired Agesilaus to grant him peace, promising him large sums of money, on condition that he evacuated his dominions. He promised also to restore the great cities in Asia to their liberty on condition that they paid the established tribute, and he hoped (he said) that this condescension would induce Agesilaus to accept peace and return home, the rather because Tisaphernes, who was guilty of the first aggression, had been punished as he deserved." (Quoting Xenophon in the last sentence in a note.) Agesilaus replied, "His country was the sole arbitress of peace. For his own part, he rather chose to enrich his soldiers than himself, and the great honor among the Greeks was to carry home *spoils* and not *presents* from their enemies. Nevertheless, to gratify Tithraustes for having destroyed *Tisaphernes, the common enemy of the Greeks*, he decamped and retired into Phrygia, receiving thirty talents from *that Vice Roy*, to defray the charges of his march." You will observe that the head of Tisaphernes was cut off by order of the Persian King, for violating the treaty with the Greek cities. He (Agesilaus) only quit Lydia to march into Phrygia; the former, ruled, perhaps, by Tithraustes, the latter by Pharanabazus. Persian governors and generals submitting and paying court to a Spartan commander in a plain cloak, causes Plutarch to quote the lines of Timotheus: "Mars is the God, and Greece reveres not gold." Agesilaus was bribed against and Persian Darics distributed among Athenian and Theban orators, compelled his return from the conquest of Persia to the defence of Sparta. Persian coin having the impression of an archer, he said, "He was driven out of Asia by ten thousand of the king's archers." Thus Alexander gained that renown for himself and the Macedonians, which Agesilausand his Lacedemonians could easily have won. The King of Sparta, whom we are now discussing, was remarkable for his plainness of dress, diet, and lodging, and for the simple equipage of his wife, and the furniture of his house; to wit: for his contempt of wealth and luxury. His moderation and disinterestedness were as much esteemed as his wisdom and his gallantry. He may have had two faults: partiality for friends and relations, and love of the excitement of war. I think you have hastily wronged an old friend. Will you repair the error? If not, what is the value of labor and fame, and what is the truth of history?

THE PUBLISHING BUSINESS.

Books from the House of Harper & Bros., N. York,—J. B. Steel, N. Orleans.

1.—*The Philosophy of Magic.*—Prodigies and apparent miracles, 2 vols., from the French of Salverte. Nothing can be more interesting and instructive than the developements here made of heathen occult sciences and art,—mysteries of ages are explained upon principles of reason.

2.—*Lives of Balboa, Discoverer of the Pacific; Hernando Cortez;* and *Pizarro.* Biographies which shed great light upon the history of the New World. 1 vol.

3.—*Country Rambles*, by Mrs. E. F. Ellet, of South Carolina; a lady well known in the literary world. This work is particulacly attractive for the young.

4.—*The True Believer*, by Rev. Asa Mahan.—A small volume, but abounding in precious consolations for the thoughtful, the afflicted, or pious mind.

5.—*Scenes in Nature.*—For the young, illustrated with maps and cuts exhibiting the various natural curiosities and physical features of the country.

6.—*Questions in Geography*, Adapted to Morse, by R. G. Parker, for Schools.

7.—*Letters, Conversations and Recollections of S. T. Coleridge.*—This is a second edition of these interesting and instructive letters, etc., collected by one who for many years enjoyed the friendship and inmost confidence of the "most variously gifted and extraordinary man that has appeared in these latter days."

8.—*Cinq-Mars.*—A historical romance, translated from the French of Count de Vigney, by Wm. Hazlitt, Esq. The scene is laid during the reign of Louis XIII.

9.—*Tales of Woman's Trials*, by Mrs. S. C. Hall.—There are sixteen tales in this connection, woman being the subject of them.

10.—*Illustrated Shakspeare.*

11.—*Illustrated History of England.*

12.—*Fortesque*, by J. Sheridan Knowles.

Our Exchange List.—1. *Simmonds Colonial Magazine.*—A work which our merchants should all procure, giving as it does, the best view of British colonial commerce and policy. 2. *Hunt's Merchants Magazine*, with a paper from W. S. Upton, of this city. 3. *Bankers' Magazine*, for March.—In addition to other interesting matter, this number contains some twenty or thirty pages of monographs of different American coins; the work deserves a most extensive support, and we are sure will have it. 4. *Southern Literary Messenger.*—Interesting as usual, with another part of the new history of Virginia. 5. *Southern Quarterly Review.*—Now in new hands; we know the editor, J. Milton Clapp, and have long known him well; the South can produce few better scholars. 6. *Farmers Library.*—Containing a valuable article on Draining, and several admirable engravings 7.—*Law Reporter.* 8. *Silliman's Journal.* 9. *Democratic Review.* 10. *Whig Review.*

Books from J. C. Morgan, New Orleans.

1. *Notes on the Upper Rio Grande*, by Bryant J. Tilden, Jr., expressly by order of Major General Patterson, with maps and charts. 2. *New York Illustrated Magazine.* 3. *Godey's Ladys Book*, for April. 4. *Graham's American Magazine*, for April. 5. *Westminster Review.* 6. *Blackwood's Magazine.* 7. *Caloric, Origin, Matter, and Law of the Universe*, by Trastour, of New Orleans, and published by T. Rea, with a map. We regret that a want of time has prevented us from looking into the work as yet. We shall do justice to it hereafter.